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[OFFICIAL NOTICE.]

Third Meeting, Southern Gas Association.

OFFICE OF THE SECRETARY,
SOUTHERN GAS ASSOCIATION,
ROME, GA., Feb. 25, 1911.

The third meeting of the Southern Gas Association will be held in Montgomery, Ala., on the 19th, 20th and 21st of April next. The convention headquarters will be in the Exchange Hotel, that city.

Hotel rates are quoted as follows:

Exchange Hotel: Single room, with bath, $1.50 to $3.50; double room, with bath, $2.50 to $5.

Gay League Hotel: Single room, with bath, $1.50 to $2; double room, with bath, $2 to $3.

The following papers have been promised:

"Retort House Practice," by Mr. E. C. Beach, Little Rock, Ark.
"Gas Lighting," by Mr. J. N. Cooke, Jacksonville, Fla.
"Maintenance Household Appliances," by Mr. F. G. Dean, Atlanta, Ga.
"The All-Gas Kitchen," by Mr. G. M. Howsmon, Mobile, Ala.
"Advertising," by Mr. Albert B. Kelly, Philadelphia, Pa.
"My Hardest Proposition in the Gas Business," by Mr. W. G. Leet, Greenville, Miss.
"Water Heaters," by Mr. W. J. McCortney, Kalamazoo, Mich.
"Industrial Appliances, by Mr. G. W. McKee, Rockford, Ills.
"Laboratory Records in Works Economy," by Mr. R. M. Redding, Macon, Ga.
"Purchasing Ethics," by Mr. J. C. Rushin, Atlanta, Ga.
"High Pressure Distribution," by Mr. F. H. Sawyer, New Bern, N. C.
"Street Mains and Service Construction Policy, by Mr. K. L. Simons, Birmingham, Ala.
"Starting a Gas Company, by Mr. J. C. Storm, Amarillo, Tex.
"The Relation of Departments, New Business and Distribution," by Mr. Geo. Williams, New York City.
"Shop Management," by Mr. A. W. Young, Knoxville, Tenn.

Negotiations with Passenger Associations regarding rates of transportation are now pending. The result of these will be announced later.

JAMES FERRIER, Secretary.

[OFFICIAL NOTICE.]

Seventh Meeting, Southwestern Electrical and Gas Association.

SOUTHWESTERN ELECTRICAL AND GAS ASSOCIATION,
1316 COMMERCE ST., DALLAS, TEX., Jan. 29, 1911.

To the Members, Southwestern Electrical and Gas Association: At a called meeting of the Advisory and Executive Committees of the Soutwestern Electrical and Gas Association, it was decided to hold the Seventh Annual Convention of the Association in Houston, Tex., April 27, 28 and 29, 1911.

D. G. FISHER, Secretary.

[OFFICIAL NOTICE.]

Annual Meeting, Wisconsin Gas Association.

WISCONSIN GAS ASSOCIATION,
OFFICE OF THE SECRETARY,
MILWAUKEE, March 4, 1911.

To members of the Wisconsin Gas Association: The annual meeting of the Wisconsin Gas Association will be held in Milwaukee on May 17-18th, 1911, and it is planned to devote a considerable portion of the time to the subject of "Efficiency Engineering" or "Scientific Management." This new profession, which has recently received so much publicity in connection with the railroad rate hearing, is, of course (to some extent), only an old friend with a new title, proposing, as it does, to develop net earnings by scientific management and exact methods, instead of by the hit-or-miss methods in common use.

We are all, in a sense, trying to be efficiency engineers, in that we are constantly working to increase earnings and keep down expenses, eliminate friction and lost motion in men and machines, promote co-operation, etc., and if the efficiency engineer can enable us to do all this in a better and surer way we certainly can use him.

Some of us—perhaps most of us—have been wondering whether or not an expert analysis of our organizations and methods would disclose possibilities of profit development to which we are blind from long contact and habit, and it has been thought that, if we should all get together next May, prepared to contribute to a discussion of the matter, considerable light would be thrown on the subject. It is suggested that each member keep the matter in mind and try to bring to the meeting a statement of at least one thing he has accomplished, or hopes to accomplish, to increase efficiency, and such questions as to how improvements can be made, as have suggested themselves to him.

The matter is brought to your attention at this early date, with the hope that you will think it of sufficient importance to warrant giving it some thought, and with the further hope that you will write, stating your opinion of the plan and making any suggestions which occur to you.

We need the help of every member, even if it can go no further than sending in a question for the meeting to discuss and, if possible, to answer.

Articles on "Scientific Management" may be found in the February number of "The World's Work" and in the March numbers of "System," "The Century" and the "American Magazine."

Soliciting your kind co-operation toward the success of our next meeting along the lines above suggested, I remain,

Yours truly, W. H. WINSLOW, President.

[OFFICIAL NOTICE.]

Third Annual Meeting, Pennsylvania Gas Association.

PENNSYLVANIA GAS ASSOCIATION,
OFFICE OF SECRETARY-TREASURER,
LEBANON, PA., March 2, 1911.

To the Members Pennsylvania Gas Association: The meeting of the Pennsylvania Gas Association will be held in Reading, Pa., April 12, 13 and 14, 1911. Headquarters will be the Mansion House. The following papers have been prepared:

"Qualifications for Successful Manager of a Public Service Corporation," by Mr. C. W. Butterworth, Milton, Pa.

"Installation of Gas Arcs and Consumption Results," by Mr. J. Vandenbout, Williamsport (Pa.) Gas Company.

"Distribution Shop Practice," by Mr. W. L. Chewning, Consumers Gas Company, Reading, Pa.

"Gas Kitchens," by Mr. H. H. Ganser, Norristown, Pa.

"Some Notes on Purification and Manufacture in General," by Mr. J. W. Murdock, Bethlehem (Pa.) Gas Company.

"Further Notes on Office Records and Forms," by Mr. J. Floyd McPherson, Easton (Pa.) Gas and Electric Company.

"Further Notes on an Automobile and Motor Cycle Experience," by Mr. L. R. Dutton, Philadelphia Suburban Gas and Electric Company, Wyncote, Pa.

"Soliciting Business in Small Cities," by Mr. L. M. Lincoln, Mauch Chunk, Pa.

"How Shall We Conduct a Canvass for New Business when the Gas and Electric Interests are Conducted by the Same Management," by Mr. W. C. Anderson, Manager, Wyoming Gas and Electric Company, Plymouth, Pa.

Arrangements have been made for a theater party, an informal dinner, and a visit to the wrought iron pipe works, of Reading.

Everybody interested in the gas industry is cordially invited to attend. Respectfully, W. H. MERRITT, Secretary.

BRIEFLY TOLD.

CURRENT MENTION.

MR. T. D. MILLER has been appointed Manager of the gas division of the clay products factories, Evans & Howard Firebrick Company, St. Louis, Mo. The best of good luck to him.

THE Engineering Company, of Trenton, N. J., the official head of which is Mr. Frank D. Moses, has just shipped the iron and steel apparatus necessary for the construction of the new gas plant at Crissfield, Md., the contract for the erection of which was awarded in entirety to the contractor named. The plant is to have a daily output capacity of 150,000 cubic feet, and it will be in operation by June 1st. Many will share with the writer the thought that things "do move" along the Chesapeake Bay estuaries and tributaries, especially those who perhaps a decade and a half ago knew the waters near by to Crissfield as the greatest possible containers of the soft-shell crab, the waddling terrapin and the toothsome Wilson snipe. And now it is a gas works! However, the Crissfield metamorphose is no more astonishing than that recently recorded at Havre de Grace along like waterways. Prior to the late eighties, Havre de Grace Point was well beloved of the veteran gunner, for from its many points of vantage, in the early spring and late fall, echoed and re-echoed the tones of the guns and marked the fall of the fast-flying canvas-back, redhead, broadbill or mallard, as these were winging their way north for the nesting time or south for joys of the recreation days. No, the veterans may regret the days of old in and about Chesapeake Bay, and the wondrous things that nature showed in all primitiveness on and by its many indentations; but, take it all-in-all, there is small cause for regret over the changed conditions, since the development of to-day means vastly more to the human race than ever came to the sportsman through the joyous thrill which marked the fruition of a successful shot. The Crissfield Gas Company is backed entirely by local capital, and there can be no doubt that the investment will prove a paying one from the outset.

THE Ocean County (N. J.) Board of Freeholders has assented to the petition of the Ocean County Gas Company for the right to lay mains along the Shore Boulevard from Toms river to Tuckerton.

AN Assemblyman in the Wisconsin Legislature, who is bearing through life, with more or less fortitude, the personal appellative, Chauncey W. Yockey, is responsible for the introduction to that law-making body of a bill which declares that hereafter gas companies in cities of that State, having a population in excess of 50,000, shall charge not to exceed 50 cents per 1,000 cubic feet. It will be permissible, however, to charge the existing minimum monthly service charge of 25 cents per month per meter, when the consumption for any month is less than 25 cents in value, the 50-cent rate applying. While there is little likelihood of the bill becoming a law, owing to the facial indications for its presentation to the lawmakers (in other words, because of its striking resemblance to a "strike"), it nevertheless has a chance for enactment, thus emphasizing anew the need for independence in local politics, and the strong incentive that is put on corporate bodies to rather "protect" themselves before than after the votes have been cast.

THE New York State Civil Service Commission has announced that Mr. Joseph K. Pettingill, of Mount Vernon, N. Y., was the "honor's man" in the recent competitive examination for the part of chief inspector of gas, Public Service Commission, Second District. The salary is $2,500 per annum. And, right here, it seems proper and appropriate to say that that sum is quite well below the salary which the position should command; that is, if it is the aim of the State to place in such stations men properly qualified, by tuition, training and experience, to take up intelligently the many intricate problems with which they are likely to be confronted.

IN the case of the La Crosse (Wis.) Gas and Electric Company *vs.* the authorities of that city, the Supreme Court has ruled that, operating under an indeterminate franchise, the method frees the Company from paying into the city 2 per cent. of its gross earnings, which royalty the Company was paying under the terms of its former franchise, but which franchise it had surrendered to avail itself of the opportunities presented under the State Railroad Commission law. The Company paid the tax up to 1908, when payment was refused because of the changed conditions. Hence the suit and its present termination.

THE proprietors of the Moncton (New Brunswick) Electric and Gas Company will expend a large sum this season on the gas division of that enterprise, the chief betterment to be on the distribution system.

THE Trustees of the village of Pleasantville (N. Y.) have consented to the terms of the proposition submitted by the Westchester Lighting Company, under which the latter agrees to extend its main system through the streets of the former. A contract for the public lighting of the place is also involved. These steps were taken after an extended investigation was made by the authorities as to whether or not it would be profitable to engage the village in the operation of a lighting plant on municipal account.

DISREGARDING the loud in manner, though feeble in effect, arguments of S. Gross Horwitz, who appeared some days ago before the Public Service Commission, of Maryland, in opposition to the petition of the Baltimore Consolidated Gas Company to issue $1,500,000 new stock—$735,000 of which would go towards taking up prior lien preferred stock, the balance to be used for acquiring additional property, paying for extensions, betterments and the like—the Commission sanctioned the proposal. In issuing the order the Board stipulated:

"And it is further ordered that said corporation shall report to this Commission, upon the sale for cash of the common stock authorized and approved as aforesaid, or any part thereof, the fact of such sale or sales, the terms and conditions thereof and the amount realized therefrom.

"At the termination of each and every period of 6 months, from the date of this order, the disposition and use made of the proceeds of said stock, and the facts and circumstances as to the property acquired and the construction, completion, extension and improvement of its facilities."

MR. CHARLES WENZIL (and others), of the town of Mount Union, Pa., have received an ordinance from the authorities governing the operation of a gas plant there. The ultimate fruition of the proposition is largely contingent upon the action in similar premises, of the outlying borough of Mapleton.

THE new gas plant at Atlantic Highlands, N. J,, is making progress that is little short of phenomenal. Orders for cooking apparatus—many of which are for high-class ranges—are being booked by the score, and the like remark applies to services. The output is increasing by a percentage that is many per cent. in excess of that which its promoters counted on, and altogether the result is a queer commentary on the perspicacity of those in control of the Consolidated Gas Company, of New Jersey, the pipes of which system have been for years only a few (and quite few) miles away.

Address of the President (Mr. A. H. Harrington) on the Occasion of the Seventh Annual Meeting, Illinois Gas Association.

Gentlemen of the Illinois Gas Association: The honor you gentlemen confered on me last year now affords me the opportunity to welcome you to this, the seventh annual meeting of the Illinois Gas Association, and I desire at the time to express my sincere appreciation of the favors shown me by this body, and to acknowledge my deep sense of gratitude to the membership for your earnest co-operation and generous support.

We may well congratulate ourselves upon membership in this organization, a practical Association which is deservedly held in such high regard throughout the country, due in a large extent to our rapid development and growth, and particularly because of the high caliber of membership, all of which reflect great credit on our past officers.

Each and every one of us, as a manifestation of our sincerity of purpose, should constitute ourselves a committee of one, whose aim it would be for the next year to introduce at least one new member, and I am sure that, with very little individual and concerted effort, this can be accomplished and the continued growth of our Association be assured along successful lines.

Following the suggestion of my predecessor, that an effort be made to enlist every gas company in our State in our Association, I would say that this effort was made by correspondence, but regret that thus far such effort has not proved to be a success. There are at present 12 companies in our State not represented in our Association, so would recommend that our efforts in this connection be continued and in an increased measure.

And now a word or two in regard to the work of the members: We gather together annually to listen to the reading and discussion of papers well prepared and of great interest to all; but, gentlemen, I feel that the discussion should be more intense. I feel that great personal gain can be had if each of us compares his ideas and thoughts with those of his fellow members, and am certain that the old saying, "*Comparison is the Mother of Progress*," will still hold true. Surely, there is no better place for an exchange of thought than right here.

Manufacture.—The statement has been made on different occasions that the engineer following this particular branch of our business—*i. e.*, gas production—is not as important a factor as he was years ago; but I will have to take issue with this, as perfection or anything near its approach has not yet been reached in any of the different processes of gas manufacture, although higher efficiency and new thought are developing every day. Great thought should continue along the lines of manufacture of all the common processes known to-day, namely, carburetted water, coal, oil and coke oven gas, as there is still a field and a large one. The last named process I think offers the largest field and is practically an infant in this country.

In carburetted water gas we have had at hand for years data showing the enormous amount of sensible heat going to waste every hour; but how many of us, knowing the magnitude of this loss, have applied this knowledge to the utilization of these gases in a practical manner? This is only one of many chances in the field.

Developments have recently brought on the market an accessory to the gas generator, which insures a uniform condition of the fire at all times, an increased make, and, as a result of a uniform fire, a uniform grade of gas; and, in addition to this, is a saving in labor. The thing I have in mind is a rotary grate.

It is fortunate indeed for us that the field for improvement in the manufacturing end is by no means exhausted, and it should not be hard for any of us looking a few years into the future to see that our salvation lies in a gas suitable for use in incandescent lighting, cooking, heating, power and industrial purposes.

Commercial.—Recent years have brought to the gas companies another proposition, one which is growing every year; namely, the placing of gas as a commodity in competition with other methods of lighting. This competition, and it is strong, is really the cause of a new department as we find it to-day in gas work, that of commercial management. To-day we find it indespensable. For its creation we are much indebted to our competitors, for brushing up as it does daily against the new ideas of our competitors, it has been the cause of much of our recent progress. Here in this field we have men striving for existence against new ideas which they must meet, and have met well, and it is clearly another case where "Necessity is the mother of invention." The results of this department are gaining from year to year, but its greatest asset in the future will doubtless be the application of gas to ind ustrial purposes. It is to this department also that gas companies must look to combat the fast growing feeling against public utilities of all descriptions caused by the erratic and unfounded statements of some public men and some of the press.

Legislation.—Important legislation is now pending in our State Legislature having direct bearing on our future, and we should not fail to lend our energy in this case to conserve our rights even as public servants. It should make but little difference to gas companies who makes the right thing possible as long as it is right. To insure justice to all we need freedom to combine and co-operate under fair control of rates, capitalization and service.

In conclusion, gentlemen, permit me to say that there are 8 very interesting and instructive papers to be read at this meeting, and I trust a careful consideration of the subjects will bring out a liberal discussion that will prove not only of educational advantage but of interest to us all.

And now, gentlemen, I desire to again thank the officers, committees and members of the Association for the hearty co-operation given me as your President during the past year, and to express the hope that, not only will this meeting prove interesting and enjoyable to all, but that, as a result of our gathering, we may create additional interest in the work of our Association, and that our future efforts may meet with still greater success in advancing and maintaining the objects of our Association. Gentlemen, I thank you.

[Official Report.—As Furnished by the Secretary.]

PROCEEDINGS, FORTY-FIRST ANNUAL MEETING, NEW ENGLAND ASSOCIATION OF GAS ENGINEERS.

First Day—Morning Session.

The forty-first annual meeting of the New England Association of Gas Engineers was held at Young's Hotel, Boston, Mass., February 15 and 16, 1911, under the Presidency of Mr. W. H. Snow, of Holyoke, with Mr. N. W. Gifford as Secretary. The meeting was called to order by President Snow, who said: The first order of business is the reading of the minutes of the last meeting. Those minutes have all been printed. What is your pleasure as to having then read now?

On motion of Mr. Morrison the reading of the minutes was dispensed with.

Report of Board of Directors.

The Secretary read his report, as follows:

To the members of the New England Association of Gas Engineers: Your Directors would report as follows:

They have received the following applications for membership in the Association and would recommend their election:

Active Class.

Bird, V. P., Fall River, Mass. Pearson, T. L., Lowell, Mass.
Hamilton, E. R., Providence, R.I. Sawyer, C. P., Westbrook, Me.
Lyman, J. M., Easthampton, Mass.

Associate Class.

Belcher, F. L., Springfield, Mass. Page, Edward, Boston, Mass.
Blood, C. E., Fitchburg, Mass. Taylor, H. G., Lawrence, Mass.

The following resignations have been accepted:

Active Class.—O. R. Tinker, A. W. Bowen, R. J. Long, C. J. Nutting, R. E. Slade, F. H. Shelton, H. M. Harriman.

Associate Class.—F. S. Pratt, F. B. Dowst, O. B. Evans, W. F. Spear, C. C. Wilder.

They have also examined and approved for your consideration the following papers:

The President's Address.
"New Coal Gas Works at Providence, R. I." Statement, by J.W. Ellis. Description, by Carroll Miller.
"Sign and Special Lighting by Gas," by W. S. Farrow, Cambridge.
"Gas Arc Street Lighting," by H. H. Kelley, Waltham.
"Salesmanship," by Edward Page, Boston.
"Effects on Distribution System at Springfield of Break in Water Main," by B. P. Bill, Springfield.
"Consumers' Equipment Inspection," by H. K. Morrison, Concord, N. H.

Respectfully submitted, N. W. Gifford, Sec'y.

The President—Gentlemen, you have heard the report of the Directors. What is your pleasure?

On motion of Mr. Witherby the report was accepted and filed.

ELECTION OF NEW MEMBERS.

On motion of Mr. J. J. Humphreys the Secretary was instructed to cast one ballot for the candidates. The Secretary reported subsequently that the instructions had been carried out, and the President having announced the results, welcomed the new members and asked them to participate in the proceedings. The President then read his

INAUGURAL ADDRESS.

Gentlemen of the New England Association of Gas Engineers: We are in the beginning of the fifth decade in the life and experience of this Association, arriving at the mature age of 41 to-day. That its influence has been far-reaching is without question. We are better gas men and better citizens because of it. The need of such associations and societies is recognized in all branches of business, while the need of the continuance of this one of ours was perhaps never greater than at the present time. These are strenuous times we are living in, and every item of knowledge and experience must be taken advantage of if we are to remain in the van of the lighting business. These meetings make the very best possible clearing house of ideas, knowledge and experience that one could have. And just here we may yield to the temptation to pause and congratulate ourselves that this old Association of ours has never been merged into any other, and this, too, without any reflection against the large societies nor insinuation that they do not fill the bill. They do. They fill a very large place in the general welfare of our business, one that the smaller, independent Associations could not attain. From their size, the many influences they can bring to bear upon any question in the business and the money they can command, make their position unassailable; but the close friendships and the intimate relations of the individual members are lacking. To me the chief charm of this old New England Association is the lifelong friendships I have made and the many I feel free to go to for help in case of any puzzling question, and whom I feel will come to me as readily for the same reason. We have our papers and discussions, technical and executive, but we get our most valuable help from the quiet conversations and exchange of experiences in the corridors and rooms, other than at the meeting place.

According to the information I have received from the companies in different sections of New England, I can report a fairly prosperous year for our business in the one just past. The "old reliable" seems to be holding its own. If one were inclined to be pessimistic and feel as though we were not getting our share of the lighting business, I think a visit to the gas show in this city last December would have given him new courage to believe that such was not the case. That "competition is the life of trade" was most certainly shown to be true in Mechanics' Hall at that time. If it had not been for the advent of electric lighting, the wonderfully efficient and pleasing lamps shown at that time would not in all probability have been in existence. I believe it to be true that, in passing a line of stores, the ones that stand out noticeably as the best illuminated are those in which mantle burners in some combination are employed and maintained in proper condition. The companies that meet electric competition on its own plans of free installations and renewals are the ones that are able to keep in the van in the illuminating field.

For a number of years the condition of the tar market has been very unsatisfactory, nor has there ever been a good market for water gas tar. Conditions at the present time appear to be changing for the better. Owing to the demands for different good roads or different surfaces of good roads that have been brought about by such a widespread use of automobiles, a field is opening for the use of both coal and water gas tar that cannot help but stiffen the prices upon the former and create a market for the latter. The use of either is not confined to macadam roads alone; but is of as much, and I believe more, benefit to a hard gravel road. Coal tar is a great preservative of the surface of a hard, firm road, preventing the wear very appreciably and the wash practically entirely, while water gas tar is believed by some to be as good, or better, a preservative of the surface and a dust layer as any of the dust layers on the market. If the road authorities of your various districts have not tried either or both upon the roads under their control, I would most strongly urge you to get into communication with them. Talk up your product and get them to give your tars a try. Even if you have to make them a present of considerable quantities to induce them so to do, it will pay you in the end. The experience in my home city has been such that I can state most positively anyone can advocate the use of tar upon the roads with perfect confidence in the results.

What is a gas engineer? This is a question often asked; but I have never heard it answered. To my mind, he must be a more all-round man, a "Jack" of more trades than in any other profession. He, to be successful, must have some civil engineering, some mechanical, chemical, illuminating and electrical engineering, be something of a draughtsman and architect, a good salesman, able to handle men, meet the public and the public's representatives in the city and town governments and keep on cordial terms with them all. So far as I know, however, there is no established way for a man to acquire the title of gas engineer. Until very recently none of our colleges or universities have had a gas engineering course, so practically there has been no way which a man could acquire the standing of gas engineer, save through his own practical experience and the aid of the associations. I am inclined to think there has never been given due credit to the gas associations for the part they have taken in the education and training of our gas engineers.

The latest developments in generating coal gas (those by vertical retorts) are beginning to get a foothold in this section of the country. There are two installations of the intermittent type of charging, already built, and one of continuous charging contracted for. The most notable installation, for size and completeness in the country, has been made in Providence, the results from which will be given us in a paper later in the session. Through the courtesy and generosity of the Providence Gas Company and the public spirit of its officers, this Association has a chance to visit this most modern coal gas plant and see for ourselves one of the best laid out, best built gas works in existence. A visit to this plant will prove an object lesson to any engineer, and I can assure the members they can give the Providence folks no heartier form of thanks and appreciation than by a large turn-out on the trip of inspection. I think the Association is particularly fortunate in having this opportunity. This visit is one we all would like to make some time, and probably would, some time, but how many there are of us to whom some time never comes. Now, our some time has come right to us and is ours to take advantage of.

Years ago it was thought undesirable and perhaps impossible in Northern climates to operate gasholders out-of-doors. They were all housed at large expense; but the added capital was considered seemingly necessary. The practice was continued until such time as holders had to be constructed so large that the expense of housing them became prohibitive. Then it was found entirely unnecessary to house them, either for the protection of the holders themselves or for the manipulation of or effects upon the gas. Holders, no matter how small, are now built out-of-doors. Arguing from this past experience, it is a question if other buildings about a gas works cannot be dispensed with, with a consequent saving in the investment. If the holders can be worked with no housing, why cannot the purifiers? There are sections of the country, where they have cold winters, where this is done. Of course, the interior of the boxes must be kept warm to facilitate the chemical reactions, and that means an expense for steam; but it is a question if that is not less with only the boxes themselves to heat than with a purifier building plus the boxes. If it is practical to successfully operate our purifiers out-of-doors, then we have added in our present practice to the capital charges, the fixed charges and the repair accounts, without any adequate returns. Another capital expense that most of our plants have had to stand is the housing for the coal. When gas works become so large they cannot afford coal sheds, the coal is stacked outdoors; but the works still can make a gas that is marketable and profitable. If the large plants cannot afford coal sheds, how can the smaller ones?

There is one practice of the larger companies that it would be well for the smaller ones to follow as closely as possible, that of having a chemical laboratory and a chemist to operate it. There are so many puzzling problems continually arising in the manipulation of gas works that a trained analyst is needed to solve them. All of a sudden a manager may be overwhelmed with an excess of sulphur in the gas; what is the cause? Has he just received an unusually sulphurous lot of coal? are the tar extractors and scrubbers doing their work properly? or has the oxide become inert? The works or the distributing system may become "plugged" with naphthaline; where is it coming from? The candle power may drop unaccountably; a skilled investigator will locate the trouble. It is getting to be more and more the practice to buy coal on a guaranteed analysis. These are a few suggestions showing the desirability of having a chemist on the force of operators. Of course, it is well understood that all of our works are not large enough to warrant such an expenditure; but is it not possible for two or three, possibly four, companies, favorably

situated to join together, share the cost and get the benefits of skilled chemical oversight?

One subject that is being considered more and more by public utilities and their associations is that of depreciation. That there cannot be a hard-and-fast rule laid down to cover every case seems to be the fact; but that depreciation in some form should be reckoned with is coming to be recognized. It is coming to be allowed that it is a legitimate charge against the business in order to maintain the integrity of the capital. Companies in the past have been afraid to carry a large reserve fund of any character, but commissions and controlling authorities are beginning to demand rather than to discourage the formation of these funds. The law in this State requires a 3 per cent. depreciation fund to be laid aside for all lighting plants owned by municipalities, the 3 per cent. to be figured upon what is practically the total physical value of the plants, less the value of the land. With that precedent established, in this State at least, there would seem no reason why such funds might not be established. There seems to be no rule in the treatment of this matter, each company being a law unto itself, while its law does not often operate twice alike, it apparently being governed by the exigencies of each individual case a year. A few years ago there was a compilation made from the reports of the Gas and Electric Light Commissioners, showing the practice of two years in this State of the different companies in this matter. The results were interesting as showing the average practice in the treatment of depreciation. Out of 45 companies, having plant valuations of over 250,000, 16 charged off nothing, while 29 charged an average rate of 2.63 per cent. In the following year, 18 charged nothing and 27 charged an average rate of 2.47 per cent. Taking all the lighting plants in the State, both large and small, in the first year under consideration, out of 126 plants 69 charged off nothing, while 57 charged at an average of 2.79 per cent. In the second year, out of 124 plants, 64 charged nothing and 60 charged at a rate of 2.76 per cent. It may be assumed that these figures give a fairly accurate average of the practice of all our companies. The subject merits close and careful consideration and is one of the most important connected with the financial side of our business.

The "Grim Reaper" has been active during the past year, four of our members having passed on during that time: F. L. Beedy, of the East Boston Gas Company; Charles H. Gifford, Superintendent of the New Bedford Gas and Edison Light Company; George L. Manchester, of East Hampton, active members; and W. W. Webber, President, Athol Gas Light Company, associate member. It is with sorrow that I have to record these losses, for we can ill spare them from our ranks.

The Vice-President—Gentlemen, you have listened to a well written address by our President. What is your pleasure in regard to the same?

Mr. Anderson—I move it be accepted and placed on file.

The Secretary—I hope some more action than that will be taken. I don't think it is indifference; I think it is probably diffidence that prevents all the members getting up and saying something about this address. There are several points in it which it seems to me are worthy of consideration now or later. The matter of tar will probably come up later through the topics for discussion or the question box, as there has been a request for discussion on that. If nobody wants to say anything about it, I would like to substitute for Mr. Anderson's motion that it be referred to a committee which will give it a little more formal consideration than just to place it on file. [Seconded by Mr. J. J. Humphreys.]

The Vice-President put the question, declared it carried, and named as such committee Messrs. Prichard, Kennedy and Humphreys, instructing them to report their findings at a time later in the session.

Report of the Secretary and Treasurer.

As Treasurer, Mr. Gifford reported: Cash on hand at beginning of year $207.22; cash received during year, $1,625; an expenditure of $1,295.21; a balance for year to credit of $537.01, and a total of cash on hand of $923.73.

On motion of Mr. J. J. Humphreys the Treasurer's report was ordered received. As Secretary, Mr. Gifford reported:

At the 40th annual meeting of the New England Association of Gas Engineers there were elected 6 active and 12 associate members. There are now on the roll, 6 honorary, 137 active and 92 associate members.

The "Proceedings" of the 39th and 40th Annual Meetings have been published in book form and are being sent out to-day. These volumes contain a list of books in the library, extra copies of which can be obtained by the members. N. W. Gifford, Secretary.

The Secretary orally added that the "Proceeding's" book had not been paid for yet, so that the apparently plentiful supply of funds would be reduced somewhat when that account was settled.

On motion of Mr. Witherby the report was received and filed.

Reading the Correspondence.

The Secretary announced that quite a colllection of correspondence had been received, some accepting invitations, some regretting. The acceptances, I suppose, will speak for themselves in person and most of the regrets I will merely read by name. I have one letter which I think is worth being read, for it is written in his own hand by Chief Bradley of the Consolidated Company, of New York. It is as follows:

New York, Feb. 3, 1911.

Mr. N. W. Gifford, Secretary New England Association of Gas Engineers, East Boston Gas Company, East Boston, Mass.

My Dear Mr. Gifford: I am this day in receipt of the notice for the Annual Meeting, on February 15th and 16th, and, as usual, have to regret that I shall be unable to attend. Nothing preventing, I shall be in the sunny South at that time, my present intent being to leave New York on the 12th. Were it otherwise I should surely be there. The N. E. Association is my "first love" in associations, it being the first one that I connected myself with. I trust and know that you will have a good and successful meeting and a good time as well. With kind regards, which please convey to all the membership from me, I remain, Yours truly, W. H. Bradley.

We have also regrets from Gen. Morris Schaff, Mr. A. R. Weed, Mr. Frederic Egner, who, by the way, had hoped to be here, but this morning's mail says he is laid up with a cold and cannot come; W. H. Merritt, A. E. Forstall, Henry Harman, Austin Burt, G. I. Vincent, Walton Forstall, J. B. Klumpp, Lewis Lillie and possibly one or two others whom I have not got in the bunch.

The President—Next are the reports of the committees. We had through the year a committee to attend meetings of various committees of various engineering societies around Boston. That committee consisted of Mr. Wood and our Secretary. As Mr. Wood does not seem to be in the room I will call upon the Secretary to make a report as far as he can of what is in the air regarding an engineering club and building.

The Secretary—Mr. President and Gentlemen: I would say that at present the project is in the air. A committee has had a number of meetings through the year, made up of representatives of various engineering societies in and around Boston, to see what could be done toward establishing a society headquarters; that is, for an engineering headquarters, something on the lines of the establishment in New York, and in conjunction with it an engineering or social club. Various sites and plans have been suggested and discussed. I think a circular was sent to the members of this Association outlining the original proposition, which, as you may recollect, was rather pretentious, calling for an expenditure of $1,500,000 or $2,000,000. To date one member of the committee, at least, has not seen that $1,500,000, and I doubt if the others have. Various sites have been suggested: One on the corner of Beacon and Park streets, one on the corner of Somerset and Pemberton square, one on Bosworth street, which I think is in back of the Parker House, and various downtown sites and sites in the Back Bay. One site which was seriously considered was a parcel of land which was thrown into the market by the wiping out of the old Park Square railroad station. Another site which is being considered is on Boylston street, between Tremont and Washington. in the property now occupied by the Boston Young Men's Christian Union. There is a possibility of that property being rebuilt and quarters being secured there. As I said, there is nothing definite. No club is organized; but the committee would like to get as far as possible, for its information and for a basis to work upon, some idea of what the various societies could contribute in the way of running expenses for such a building, how much space they would care to occupy and could pay for. The Civil Engineers' Society, of Boston, has quarters in Tremont Temple, and this Association has a corner of its library. Probably you have all visited the library and taken out books—not often. It is rather a pity, by the way, that more of our members cannot make use of the library facilities which we already have. So far as your committee is prepared to make any definite statement perhaps it would be this: That it might be well for the Association to authorize the incoming Board of Directors to act

in the matter provided a certain definite proposition should be brought forth before the next annual meeting, with whatever instructions the Association should see fit to give as to the limit which the Association might go to in regard to expense. I take it it would not go a great ways towards supporting a $1,000,000 building. I think you can all readily see that if such a project were carried out it might be very convenient for members individually at times and at the time of the annual meeting. If there are any questions which I can answer, relating to matters I have not covered, I shall be glad to do so.

The President—Gentlemen, you have heard the report. What is the desire of the Association over the matter? Any instructions to be given to the Directors governing their possible action through the coming year?

Mr. Africa moved that the question be left to the incoming Board of Directors. [Seconded and adopted.]

(To be Continued.)

[Abstract Report.—Continued from Page 555.]

SIXTH ANNUAL MEETING, NATIONAL COMMERCIAL GAS ASSOCIATION.

Held at Mechanics' Hall, Boston, Mass., Dec. 6th to 9th, 1910

Fourth Day—Morning Session.

Discussion on the Frampton Paper.

Vice-President McLean called for discussion on the Frampton paper.

Mr. Zingg said he thought as they were going through the poorer section of Boston yesterday, sections which no doubt all large cities have, that if a water heater were at the service of those families the neighborhood would differ in aspect. As Mr. Frampton said, they should work along educational lines. If it were possible for the average to be only 6,000 feet per year, he did not see why those families should not have water heaters. His experience with circulating types of water heaters would mean much in their territory, and he thought they owed it as a duty to that community to educate its people to use water heaters. Two sections of their territory having about 341 automatic water heaters in use their consumption had practically about $4 per month in value. A large percentage of the literature of gas companies reads: "Ranges," "Cook with gas ranges," "Use a gas range and water heater;" but he would suggest the time had come when they should not use the "and" in connection with the water heater. Why not put the water heater in a class by itself, or, put the water heater first? Every family felt that a gas range was a necessity, but every family was not educated to the point where it was felt that a water heater was as much of a necessity.

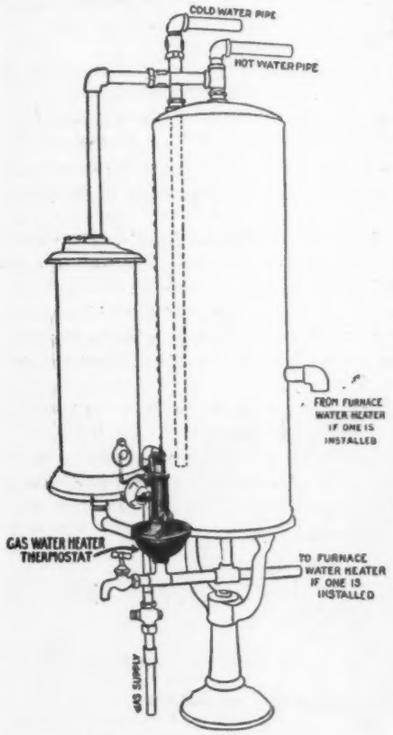
Mr. Blyler said the water heater business was a very important branch. He heard a gas man once say it did not make any difference whether water heaters were installed or not, for heating water on the gas stove was the only means of heating water in the summer time. He did not agree with that. They had conducted a very successful campaign, he believed, on water heaters, 230 having been installed in a month. The advertising they did was done especially in connection with water heaters, consisting of inserts with gas bills and in newspaper space during certain periods. No attempt was made at artistic advertising, but it was very specific. The price of a water heater was listed at $10, and it was said one could heat a certain quantity of water for a named amount of money, together with the amount it would cost for a bath. In any event, it described the water heater perfectly. As an example of its effect, a next door neighbor, who owned a 4-apartment building, said to me, "I want 4 of those water heaters set up." When told that we would tell her all about them, she said, "I know all about them. When asked who told her about them, she said, "The man who rented the apartment." I asked her where he got his information? Her reply was, "He had been reading the advertisement." The best way to sell water heaters was to advertise them at certain seasons of the year. They had installed a great many of them. The concern that installed the heaters allowed 30 or 60 days' time for satisfying the customer, and they found in every instance that the water heaters remained and that the people were well pleased with them. In fact, they were their very best boosters.

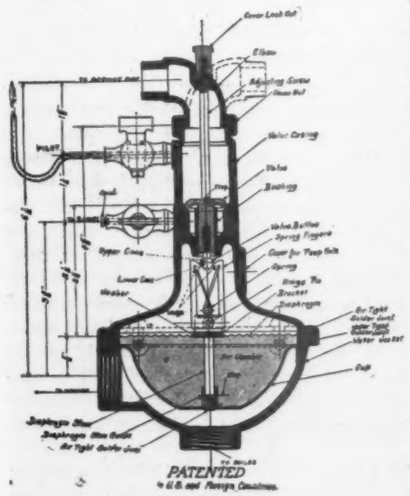
Mr. Sherwood said the gas water heater question interested every company, and he was afraid that too few of them were giving it the attention they should. They were anxious to sell gas ranges, but the water heater was too often lost sight of. Despite the fact there were more ½ million water heaters in use in the United States, as stated by the author, there was still room for millions more. If the cost of heating water could be put within reach of everyone who bought a gas range, he would not dare estimate for quotation what the percentage of difference would be between the sale of the gas range and the gas water heater. He believed Mr. Frampton put too low an estimate for the yearly consumption of tank water heaters, for in the speaker's district it was much higher. He knew specific cases where the consumption was at least 6,000 cubic feet a month. When it reached that figure it caused trouble as a rule, bringing the bill of a consumer to such a high figure that the cost of the cooking and the heating of the water became so great that the consumer cut it out and went back to coal. Such cases were only where the cook had full swing in the kitchen, and much of the gas used could have been saved if economy and judgment had been exercised. They were losing business because of that carelessness and lack of judgment. It seemed a hard matter to teach cooks to practice economy. He believed the time would come when smaller instantaneous water heaters with thermostatic control would be made that could be attached to any boiler in any kitchen at a price between the tank heater and the small storage style, say, $25 or $30. People would buy an appliance if they could be sure they would get their money's worth in the gas used. He thought the solution of the problem was in the automatically controlled heater, and that fewer tank water heaters would be placed.

Mr. Hanlan called attention to Sketch A with reference to the connection of the water heater. He tried to bring this idea before the convention last year, and it was said then that the directors would take care of it. He didn't wish to claim it was his idea, for it was the idea of a practical water heater man and a practical gas man, but he agreed to try to get the matter before the Association. It seemed that if they could, by concerted action, get the boiler makers to add additional spuds in their boiler, allowing them to make side connections, the connection of water heaters would be materially simplified, in addition to giving better service. All of them had more or less trouble with water heaters giving proper service through by-passing, unless they were connected up just right. They also had cases where men in endeavoring to make connections had burst the spud in the boiler, which was a disagreeable feature, even though they had made good for it. He was quite convinced that if they did take concerted action the boiler makers would, by putting in additional spuds, simplify the heater connection to a great extent. In this public service territory, the sales covering its entire range were a trifle above 25 per cent. of water heaters to ranges. That covered their territory, in which were located large cities. In most of their suburban territories they were getting 52 per cent. water heater sales to that of ranges. They found it a good thing to advertise water heaters alone. This coming year they would no doubt do so more extensively than last year. In one territory, where they secured the greatest percentage of increase, they pushed the advertising end well to the limit. They requested the manufacturers in furnishing them with advertising matter to furnish it as far as posslble in the form of return post cards. For the benefit of the manufacturers, in his judgment it was poor policy on their part in exploiting their own particular make of heater to say there is no danger from explosion. They should forget about that. The explosion menace was a thing of the past, and there was no reason why it should be mentioned at all. Some makers advertise the sanitary condition of water heaters. But all water heaters were sanitary now. Therefore that sort of advertising should be cut out. There was no question but that they could increase their water heater business materially, and it was good business. He agreed with Mr. Blyler that they did not have to tell the lady next door to another one who had a water heater about its good points. She knew them, and if she had got the money it was an easy matter to induce her to get one. They did not have to explain. Going out with one of their representatives to see a builder putting up a number of nice houses, our first suggestion was met with these words, "Why, gentlemen, I won't buy gas ranges, because I have sold three of these houses, and the people who are going to move in have gas ranges. Why you need not go into the merits of the water heaters. I know what they are. I have one in my own house. If the price is right I will give you an order for 20." It was easy to get that order simply because the man had experience with a water heater in his house. He knew just what it was. He favored going over their territory to discover water heaters not giving satisfaction and these we replace at our own cost.

Mr. Scherck said a simple point he would like to bring out for the the benefit of some of the smaller companies, was as to a flue connec-

tion to the tank water heaters. He knew of several places in which tank heaters were installed in kitchens without any flue connection, and there would not be very much difference of opinion on that. Still another point: He understood from the foreman of their shop that they found a number of cases where brass rather than galvanized iron pipe was advisable. He would be very glad to know if that point were well taken.


COLD WATER PIPE
HOT WATER PIPE
FROM FURNACE WATER HEATER IF ONE IS INSTALLED
GAS WATER HEATER THERMOSTAT
TO FURNACE WATER HEATER IF ONE IS INSTALLED
GAS SUPPLY



Snap-Actioh Thermostat.

Mr. Cohn believed that difficulty would not be overcome until they got some sort of inexpensive thermostatic device, which would automatically turn off and on the gas as the water in the ordinary boiler in the kitchen rose or fell in temperature, so as to approach the conditions existing ordinarily in the kitchens where hot water was supplied by heating from a coal range. The less expensive water heater attachment now called for a special boiler. They had been endeavoring for a long time to get a thermostatic device that could be readily adjusted to ordinary kitchen conditions, and he believed such a device had recently been invented at their suggestion by a first-class inventor and mechanic in Baltimore. He had no description of the device, as they had not made tests. As soon as those tests were completed he would be very glad to send to the Secretary a detailed outline description of the device, with probable costs to operate. As to the latter, he believed it would not exceed $10. Its use involved placing some sort of non-conducting material over the boiler, so as to cut down the loss of heat through radiation.

Mr. O'Donnell reported that his experience as a salesman was in a large city where they installed water heaters some years ago. That brought him back to the suggestion of Mr. Buttrick, their Commercial Agent in Philadelphia, where the manufacturers made every endeavor to produce the best water heater possible. As a salesman he had been handicapped (so had the majority of the men in his district) in placing heaters in houses that never had one, through the neighbors having had a heater of the old type. They all knew the ill condition of such heaters came from the bad nature of the water, which in running through the iron coils, corroded the pipe to the point of eating it out. There is no good reason for salesmen who sell ranges not being able to sell water heaters. A gas range is sold for the purpose of giving the consumer the benefit of not running down stairs for coal or wood, nor to take ashes to the cellar, leaving the heap there for 3 or 4 days, then having to remove them to the street barrels. For the benefit of gas companies wherever such condition existed he would suggest their managers allow a certain amount of money for an old heater, when attempting to get them to purchase a new one. He believed hundreds could be sold in situations where a poor heater had been replaced by a good one, simply through the knowledge that in time spread around that the original trouble had not been with the principle but with the apparatus. As said before, there was no good reason why a water heater should not also be installed where the gas range was in use. It was for the purpose of convenience. The consumption of gas on a water heater generally was not very large, but the device was a great convenience. They did not have to use wood, coal or any other combustible. Where gas could be used it should be used for all purposes.

Mr. Atticks said he had been trying to have the boiler makers put an extra connection, probably 6 or 8 inches down from the boiler top. The National Commercial Gas Association seems to be where it could carry some force in this matter. If they took action to follow it up he believed boiler manufacturers would come to it. He had tried in York to overcome the little troubles which arise from imperfect connections at top of boilers—it was not original with him. And probably many of the companies were doing the same thing. A number of brass devices had been brought out for making those connections at the top, but he overcame that by using a nipple-T or service-T, with a ¾ size outlet, 1 inch running over from the first nipple to the side, then reducing to ¾ coming down to the water heater. In the nipple-T the service goes into the top of the boiler, where the spud or boiler connection is taken off, and it is then raised to the top of the inch-T. This required merely an extension piece. A short nipple on the old house lining made a very simple and good connection and easy to perceive. It might be a bit unsightly, but that could be overcome. A side outlet would give better efficiency, through getting fair storage for a small quantity of water.

The Vice-President asked Mr. Frampton if he would briefly close the discussion.

Mr. Frampton said he had noted several of the points brought up in the discussion of the paper, and wished to state some excellent ones had been brought out. Referring to flue connections, the tendency among gas companies in tank water heaters was to give them good flue connections. Some of the larger companies that years ago could not connect tank water heaters were now working on the principle that a good flue connection was a rattling good investment for any sort of gas water heater. Recent years had wrought a change of sentiment in relation to the size of and power burners for tank gas water heaters; which sentiment was first shown in the West. The gas men of that section were the first in their experience to demand a large and powerful burner in a tank water heater; the larger and more powerful the better they were suited. Really the average man would have a 60-foot gas burner in a tank water heater; in fact, there is almost a demand for that size, and this in turn emphasized the necessity of a flue, from the standpoints of danger and sanitary conditions, also of efficiency, for in the modern heaters, that take the average operation, he believed the efficiency was increased through the use of proper flue connections. As to circulators, very few were now connecting the heaters with brass circulators, due to the cost. In places where the water was charged with sediment or salts, the brass circulator was without question best. It gave the smoothest circulating surface, a lack of absence from corrosion, enabling the fitter to secure tighter joints, with a more dependable and much neater looking construction. It had been found, however, through the use of ¾-inch galvanized circulators, with the use of improved types of water heaters, wherein the rusting troubles of older days were practically overcome, on the average gave excellent service. Referring to thermostats for kitchen boilers, the question was receiving much thought to-day among the gas men of the country. Personally he did not believe thermostatic control on the kitchen tank with the ordinary gas water heater was a good proposition. It had been tried in connection with some pretty good thermostats, and he noticed the gas men who tried it out had not followed it up by increasing their installations. It had been suggested it would be a good thing to have a thermostat that would merely shut off the gas when the tank came to a certain temperature, becoming thus some-

what automatic, and require hand operation to turn the gas on when the burner was lighted. He thought there would be a demand for such device, and believed, considering economy and safety, the device would to a great extent answer the need of something to counteract the negligent and wasteful operation assured when the water heater was left in the hands of an ordinary servant. As to the style of tank shown in sketch A, he found that, in response to the demand of several of the important Western gas companies, a large jobber, operating in plumbing supplies all over the United States, had answered that demand with a tank of practically that construction. The gas company in that city was educating the plumbers to instal and purchasers to demand that sort of tank. Excellent results were being obtained from it, which was without question a step in the right direction regarding improved construction. He had taken the matter up with several manufacturers of boilers and other water heaters, and they all agreed that it was a good thing; yet, for some unaccountable reason, they all adhered to the old-fashioned kind, identically alike in construction to those used 15 or 20 years ago. A feature in connection with the style of tank shown in sketch A might be referred to briefly, was the principle of back circulation in a water heater. Not many gas men, perhaps, knew that, under certain conditions, a circulating water heater reversed its function to operate as a refrigerator or cooling device for the tank. That was caused by certain mechanical and engineering reasons which would be apparent to all after a little study. Experience showed that the connecting of the hot circulator to the side of the tank, close to the door, to a great extent counteracts the feature of back circulation. After the gas was shut off and the tank water was hot, the heating surface started to chill, and the difference in altitude between the circulating and return inlets set up a back circulation or reflex movement through the heater. As to the insulation of kitchen tanks, he at one time believed in the principle of insulation, especially when the tank was operated with a gas water heater. He was informed, however, on very excellent authority, that a series of experiments in this direction, conducted by a large Western gas company several years ago, resulted in the belief that it was not a good thing to insulate a kitchen tank, for when the tank was insulated it was protected from the influence of the warm air of the kitchen, the water standing in the tank being not allowed to take on the temperature of the surrounding atmosphere. This it was claimed more than offset the advantages secured from a reduction of radiation. Respecting allowances for old heaters, he would say it was a rattling good investment for any gas company to make liberal and generous allowance for old-time circulating water heaters. The advantage gained by displacing an old, unsatisfactory device, with a heater of improved type, showing good capacity and high efficiency, was wonderful. Some of the water heater companies helped very much in this direction, and through making very liberal allowances in their own branches and agencies for old heaters displaced by modern heaters, either of the circulating or automatic type.

Vice-President McLean—Just one announcement, gentlemen. In order to expedite the matters coming before the Association it has been determined to have but one session to-day. There will be a continuous session from now until the time we get through, so there will be no intermission. It is the request that you all stay in the room and complete your business before you get away. While I am here I would like to call for the

REPORT FROM COMMITTEE ON PRESIDENT'S ADDRESS,

which was read by Mr. Norman Macbeth, as follows:

To the Members, National Commercial Gas Association: The President's address is of a character and scope to merit the highest commendation. It is seldom indeed that a commercial organization has among its workers any exponent who can, in so masterful and scholarly a manner, set forth the high standards and achievements to which we aim and for which we desire to be on record.

The commercial man, through his contact with the public, has tapped a field of usefulness and is recognized as the important representative of the company and the public to the advantage of both. That this is so has been demonstrated very clearly, not only by our phenomenal growth, but also by the active part taken in our Association by the influential financial men of the industry, and particularly those on our Public Policy Committee. Our President has pointed out how, through the efforts of the sales department, the possibilities of increasing the effectiveness of service may be from 25 per cent. to 75 per cent. Surely this is a weapon in the hands of the commercial man which may be applied to his material advantage, especially so if we consider that in the manufacturing and distribution branches of the industry the economies possible may not exceed 10 per cent.

The recommendation of your committee is that this address be read before each commercial department and local section, that the various representatives and members may better understand and appreciate the high ideals of our Association and the marvelous possibilities presented in this branch of the gas industry to the man who will take advantage of his opportunities to increase his effectiveness and win the recognition awaiting him. Respectfully submitted.

J. D. SHATTUCK,
NORMAN MACBETH,
A. V. WAINWRIGHT, } Committee.

Vice-President McLean asked the pleasure of the Association respecting the report. Mr. Blyler suggested that a copy of the message be sent to the president or manager of every important gas company.

Vice-President McLean asked for remarks anent the Blyler suggestion.

Mr. Rogers asked if the address would be published in the *Bulletin*, and Vice-President McLean replied it would be published in every GAS JOURNAL in the country, as it should be.

Mr. Rogers thereupon remarked that, in view of the wide publicity the address would thus attain, he did not think it wise to incur the unnecessary expense incidental to carrying out Mr. Blyler's proposition.

Mr. Blyler, remarking that that phase of the question had not appealed to him, asked leave to withdraw the amendment. [Granted.]

Vice-President McLean then put the motion that the report be accepted and placed on file and the committee discharged with thanks. [Adopted.]

(To be continued.)

[CONTINUED FROM PAGE 557.]

THIRD ANNUAL MEETING, INDIANA GAS ASSOCIATION.

HELD IN FORT WAYNE, IND., JANUARY 18TH AND 19TH, 1911.

FIRST DAY—AFTERNOON SESSION.

The President—We will now proceed to the next paper on the list, by Mr. Hubert S. Riley, of Indianapolis, on

THE ESSENTIALS OF A CONTRACT AND COMPLAINT DEPARTMENT.

In the application department common courtesy, tact and systematizing this part of the business will bring about the desired results. The writer is using in this department the card system in colors, and all contracts are taken on same; all necessary data being placed thereon. From these orders are made on the meter department. Cards are then filed in the cabinet, which is arranged alphabetically according to streets and in numerical order. Our cabinet is in units, and each unit has a capacity of 15,000 cards. We are using 5 of these units at present. We also have a permanent or service card, which is a house record, showing all transactions at any house or building on our line. This card system is kept up daily and works very well; but, like all card systems, if not kept up each day it would not be worth its room. I have with me the various cards used in this system and will be glad to explain their operation. But, gentlemen, the work of conducting the complaint department is of great importance to us all.

High Bills—Never dismiss a complaint of high bills by saying you will re-read or change and test meter without first looking up the account on the ledger. Compare it with the same time the previous year, get your route card and see if the number of days are the same as the month before, then have the meter re-read; but never change a meter on complaint of high bills at once, for very often after bills are received and there is a complaint about them, on account of being seemingly high, the consumers immediately start to economize and your old meter that you removed gets the blame, regardless of what you may say. Leave your meter on 15 or 20 days after statement time, then you will be able to show consumption on both meters, and this gives you foundation for argument in favor of the old meter, for you are all familiar with per cent. shown on change and test in our favor. Have a meter on your counter connected and so arranged as to show its mechanism. You can have any meter so arranged by putting in a glass front, also putting top on hinges, so that it can be opened and closed, and in this way you can satisfy that old chestnut of being "away from home," and the house closed, no gas used and bills just the same. You will be surprised after showing the work-

ings of the meter how many complaints you can satisfy. It is also advisable for gas companies to own at least one "complaint meter." This meter records the consumption each hour of the day, also showing when the consumption is the greatest, working somewhat similar to the Bristol recording gauge. You can attach this alongside your regular meter and it should be left on for about 7 days. After being disconnected, the chart is filed away in the complaint department and when your dissatisfied consumer calls at your office, you will be able to show him what actually occurred at his house for the last 7 days in the way of using gas, and a great many times the party complaining will remark, "Well, wouldn't that beat you!" Encourage complaints, rather than discourage them. There are very few imaginary complaints, and it is better for the company to hear them than the public. Don't answer complaints by letter if you can prevent it. Letter writing, in some instances, seems cowardly. It is better to call your party by 'phone after you have all the necessary information, or where the case warrants it is better still to go in person, and you will find this works better for all concerned. Be careful about arranging your office; don't have the cashier's window adjoin the complaint department, for if there are such things as imaginary complaints this is the way you get them. A party may be making a complaint about his bill, and it may be a small one, and he is talking for the benefit of every one in the office, and you may have a number of customers paying their bills, who when they started for your office had no intention of complaining, but after listening to the complaint of the party mentioned, they fall out of line after paying their bill; or, worse still, sometimes before, and enter a complaint and you have nothing to do only take care of it in the regular manner.

Leaks—When a consumer complains about a gas leak, give it your immediate attention, regardless of what he may think, for they very often remark, "Let it go until afternoon or to-morrow." But when the word "leak" is used, that should be enough for any gas man, no matter what they say. Dispatch someone there at once and talk it over afterwards, for we all realize that an accident from this cause immediately sets the ambulance chasers busy. Be sure and have a complete report made of all leaks. Our company has a motor-cycle that we use in emergency cases, and our wagon men call by 'phone several times during the day. If the trouble happens to be in the service, the order is turned over to the superintendent of that department and he attends to his part at once. Our leak orders are made on red paper with carbon copy, as red is a danger signal.

Gas-Outs—These orders are not dangerous, but are of great importance, as gas is your product and you should be at all times prepared to deliver the same. Never allow a consumer to be without gas if you can possibly prevent it. Send a man on a complaint of this kind as soon as you can with instructions to get them gas, and if for any reason he is unsuccessful, let him call assistance, or send someone in his place. Show the public you are as much interested as they are, and you ought to be, for gas is what you have to sell. There are various reasons for "gas-outs," and I judge that you are all familiar with the various causes for these complaints. When the trouble is in the stove, we refer complaints of that kind to our appliance department and they look after it immediately. Our complaint orders are made on white paper, for the purpose of distinguishing these between other orders.

Department Managers and Employers—A manager of a complaint department should be a fair diplomat and a good judge of human nature, for there are no set rules that will guide him. Listen to everything the other party has to say, take their side of it into consideration, and always have in mind the golden rule. The reason there are no rules to govern you is because all people are not constituted alike and what would work on one would fail on another, and yet the case may be identical. It is much easier to wait on 20 men and get results than it is to wait on one woman. You can generally tell when you are talking to a person if your argument is effective. Take, for instance, the customer who comes into your office on horseback ready to ride over everyone; try smoothing them down a little, giving the best you've got; but it may be necessary for you to give them some of their own medicine. However, avoid this if possible, always being sure you know what you are talking about, and it sometimes pays to be a good listener. Let parties complaining see your ledger, and have them understand you have no secrets in your business. You are all aware that a great number of your customers are dissatisfied the day they open an account with you, and this is caused by uncalled for criticism on the part of the press against public service corporations and by your own employees, and it is up to you to put a stop to this feeling. How are you going to do it? Can the managers do it? No, not as individuals. It can only be accomplished by the hearty co-operation of every employee of your company. It is essential that the telephone operator should at all times be courteous, and probably more so than the general manager, for she is constantly in touch with the public. Your meter readers, wagon men, service men, fitters connecting stoves in your appliance department, etc., should all make an extreme effort to at least be polite. Some men in the employ of public service companies take or assume too many privileges, or in other words at times "get fresh." For instance, your service men are putting in connections to a new house, which is occupied. While working they track mud all over the back porch, borrow a bucket and fail to return same or leave it in the alley. This starts you in wrong. Statement takers do not always answer questions in a gentlemanly manner. Meter setters often go to the side door, and sometimes to the front, when they should always go to the rear. No employee of any company should assume the right of tracking through a patron's house. The reason the writer mentions the men outside is because this is the part of the business you find so hard to control. We realize that mistakes are made in the office force, but they are more easily taken care of. It is very easy to get rid of an impolite clerk before he can do much harm, while a man on the outside may go along for some time before he is found out. How are we going to remedy these things? It will be necessary for the managers of the different departments to get as close to their men as possible. Have heart-to-heart talks with the men under you; try and point out to them their mistakes. There may be times when they are in ignorance of anything wrong. It is a good idea to call all your men together at intervals, explaining to them the right from wrong, and go over the business in general, making them realize that they are of some importance to the company. This makes men feel like real human beings and brings about good results. Have every man in the business gain as much knowledge as possible of their part of the work, and your complaint men acquire as much as they can of all parts of the business. Imagine an employee of a gas company being asked to show a patron how to read a meter and being unable to do so. The writer has known of several such cases. It is the duty of every member of this Association to try and get the goodwill of the public, and then we may stop the politicians who are always trying to legislate against public service corporations without having any knowledge of the business whatever and for the purpose only of gaining public sympathy and to advance their own selfish interests.

Having read the paper, the author further said: I might say in connection with this that I recently read an article in the AMERICAN GAS LIGHT JOURNAL, in which the advice was given to all men employees of public service corporations under any and all conditions to stay out of politics. I differ from the author to this extent, in that I believe it should read: "All employees of gas companies should stay out of politics as long as the politicians stay out of our business."

Discussion.

The President—The paper and the manner in which it was read by Mr. Riley convince us beyond a shadow of a doubt that he knows what he is talking about. Mr. Riley undoubtedly has had more experience than any other member of this Association in the matter under consideration. I will now place the paper before you for discussion and would like to call on Mr. A. S. Cooke, of Terre Haute.

Mr. Cooke—These Indianapolis papers are hard to go against. Mr. Riley's paper is essentially to the point as applied to the complaint department. The application department is defined in a limited way, but the indications are that his department is conducted along the line of the more advanced methods of the day. As to taking care of complaints there is no question but that a company should use every effort to thoroughly analyze each complaint received and endeavor to impress on the mind of the complainant that it feels itself under obligation to render satisfactory service. I believe that point should be touched upon on every possible occasion. A satisfactory service in every respect tends to reduce complaints, for in many cases so-called high bill complaints are instigated by unsatisfactory service. I do not quite agree with Mr. Riley about not changing meter for test when a high bill complaint is received. Not only do we make a comparison of the disputed bill with the preceding ones, but endeavor to find out the type of burner used, the hours of burning, and, in many instances, taking the customers' own statements, we have been able to convince them they used the gas. As to educating the customer in reference to gas meters, we have not only a meter fitted

with glass sides and top, but also have one in knocked-down condition, so the customer can operate it and see just how the thing works. On a panel in the front office a number of lights are connected up, with a test meter permanently attached, making it easy to demonstrate the consumption of any burner, This materially assists in impressing the customer of the wastefulness of many burners sold them by outside parties, and the saving they would effect by installing the modern lamp. We have also several copies of a table which gives the lighting hours for the months of the year and, by keeping track of the weather conditions, one is in position to demonstrate how many extra hours a person is obliged to use the service owing to dark weather. All of these factors are important. Every company should have a complaint meter. We find it is the one method that enables us to dispel all erroneous ideas regarding gas consumption, particularly in houses rented out in the main part to roomers, putting the use of gas beyond the control of the landlord. Mr. Riley's statement in regard to having the complaint window at a distance from the cashier is absolutely right. There is little need to say anything in reference to the importance of immediately looking after leaks. We find it advantageous to have our representatives report back as to the exact location and amount of leakage and a record made of the same, for frequently a customer will claim a rebate, whereas the leakage may have been on the company's side of the meter. "No Gas" is not only a very disheartening complaint, but also one which every gas company would obviate entirely, if possible. I have nothing to add to Mr. Riley's comments on the importance of having such trouble immediately attended to. I would like to say, however, that, upon locating, the trouble conditions should be changed to prevent a recurrence, for in this way eventually all difficulties of like nature would be done away. We are at present experimenting with what might be called an emergency tank. It is an ordinary 30 gallon, galvanized iron water tank, into which we compress gas at about 80 pounds pressure, and, in the case of a plugged service, which cannot be relieved, owing to the lateness of the hour, we hook on the tank and give the customer at least light enough for an evening's use. Fair treatment by a company's representative, and an honest effort to render the customer full and efficient service, are bound to win in the long run. Courteous treatment of complainants, and a willingness to go into details with them, will soon force them to realize, in most cases, at least, that they themselves are at fault, and any apparent laxity on the company's part is due to failure on the part of the customer to give notice of the trouble.

The President—Does anyone else wish to discuss the paper?

Mr. Norman Macbeth—As to one point made by the last speaker in opposition to that made by Mr. Riley, as to taking out gas meters after complaints. I have probably not had as much experience with gas lighting complaints as those of an electric nature, neither are they so numerous. As to letting a meter remain after a complaint, and make the changing and testing of the meter the last part of the investigation, I think it is a most important and excellent suggestion, founded on experience and keen observation. For some years I was connected with an electrical concern, looking after consumers, especially in the matter of their complaint division, acting also in a general advisory manner on all points pertaining to the purchase and use of energy for lamps, motors, etc., as the case might be. Almost without exception the bills for the first month or two after the concern had signed for this service were lower than usual. This was not due to any effort on the part of the company, but to a general line of economy which seemed to pervade that institution on the signing of the contract. There is no doubt that, after a high bill has been received by a consumer and a complaint has been lodged with the company, waste will be curtailed and greater economy practiced; and if the effect of that economy were shown by the registration on a new meter, the consumer would be quite likely to attribute the reduction to the new meter with a greater certainty of the error in the old one. If there is anything wrong with gas meters it is that they are too good, and were they really a little more dyspeptic it would be better for gas companies. There is no greater contributing factor to complaints than comes from slow meters. One of these in a block will cause more trouble than two fast ones, if it were possible to find such an unusual condition in 2 out of 20 houses. You can satisfy a fast meter complaint, but not the people having correct meters that appear to be fast when compared, on service basis, with the charges to a neighbor having a slow meter. If gas meters were more likely to run fast the gas companies would have to test and inspect them more frequently. With electric meters, as the electric companies have no assurance with many of the types of meters now in use that they will remain accurate for even a period of a few months, a carefully worked out system of inspection has been adopted, resulting in a remarkably high standard of accuracy being secured. I have seen gas meters taken out for testing that had not been verified for 15 or 20 years, and many of them, even after these exceedingly long periods, were remarkably close; perhaps less than 10 per cent. slow. Probably in no other department is attention to the detail of the little (almost insignificant) things of greater importance. The "complaint desk" should not be a counter with a clerk securely protected behind an iron grill, but should be a comfortable, quietly furnished inside room, with the "easiest" chair you can find for your consumer; and by all means refuse to permit him to talk business while standing—make him sit in the easy chair. When a hard-working salesman comes in some day to make a plea for more money, try the easy chair yourself and you will be surprised at the increase in his salary which you will give him, although you had decided upon an entirely different settlement. Referring to the value of complete and full investigation of all matters having a bearing on complaints about the meters, I heard an interesting experience at a convention last year, where a man complained of a prepayment meter. He wanted that meter taken out; his bills had been very much higher than with the regular meter previously in use, etc. An inspector was sent to look up the difficulty. When he reached the house the lady said, "What are you here for?" Said he, "Your husband has complained about this meter. It is not running right; the bills are too high." She said, "You leave that meter alone. I can get down to the matinee every week with that prepayment meter." Another point, as to the glass meter, which can best be connected to a board near the cashier's desk. This board should be fitted with 2 or 3 sizes and kinds of lamps with and without pilots; also, an open flame. Consumers can get a better idea of the action of a meter and the advantage of using certain lamps. We hear a good deal about the disadvantage of using pilots with lamps. A pilot will enable you to find a lamp in a dark room, which is a convenience very much in advance of anything the electric men have to offer. If you get up in the night you will generally find you will require matches to find an electric switch, but with a pilot you can find the lamp without any trouble. The electric people who talk so much of the convenience of switches are frequently gas consumers without pilots. I have made a number of observations during the past year and have found a great many electrical men whose knowledge of the convenience of electric lighting is largely from a theoretical standpoint; they use gas in their homes.

The President—I was very glad to hear Mr. Macbeth emphasize the point made by Mr. Riley in not removing the meter too soon. The gas meter's reputation is not any too good among consumers, and I think it is absolutely necessary to do everything in our power to keep its reputation good. Our experience has been, as Mr. Macbeth has said, that, in probably more than 9 cases out of 10, the immediate consumption after a complaint will show a reduction. I do not want to take Mr. Riley's discussion from him. I know what we do at Indianapolis. We make no effort to collect the bill as long as the meter is in service. We tell the consumer so, and we find that that will satisfy him almost invariably. Is Mr. Dolley in the room?

Mr. Dolley—I think Mr. Riley's paper covered the ground thoroughly regarding the contract and complaint department, but a few things regarding leak complaints might be added. It is a very important part of the business and should have precedence over all other work. The complaint order should be made out with the date, the exact time the complaint is reported, by whom the order is taken, and whether same was taken over the telephone or at the office. The one attending the complaint should put on the order the exact time the call was made, also the leak attended to and the nature thereof. These orders should be filed away so that they could be used in case the party entered suit against the company. Mr. Riley says if the trouble is in the service the order is turned over to the superintendent of that department. In trouble of this kind the man sent to investigate the leak should report same to the office, then make an effort to repair the trouble temporarily, for in most cases the service is either rusted or broken off outside the house wall and, by driving something in the pipe beyond the break, the leak could be stopped temporarily before the service man could get his tools on the job for digging up and making permanent repairs. Only one thing could be added regarding the complaint department manager. Mr. Riley says the man should be a fair diplomat, but I think he should have left out the word "air." It is also well for the manager of the company to meet the men working under him once a week, or not less than

twice a month, having the men at that time bring up the different things encountered during the week for discussion. This causes the men to feel you take an interest in them.

Mr. Dunbar—I do not agree with Mr. Riley, in that it is cowardly to answer a complaining customer by letter. I may be cowardly, yet I have found it an effective and satisfactory way to appease the customer. I do not see the advantage of putting off testing the customer's meter. I believe with Mr. Riley that, when an objection is made to the size of a gas bill, you should look up the records in the case and give them to the kicker. But it often occurs that whatever you might say to him would not at that time appease him—in fact, it frequently occurs—and I always find it very advantageous, and have been very successful in telling the customer that I would test his meter, letting him know later. I test his meter then write him a letter. In that letter I tell him the result of the investigation, also telling him that if he wishes to see the meter tested it would give us great satisfaction to test it in his presence. I also inform him if it is not convenient for him to come to see his meter tested and if there is anything further he wishes to be enlightened upon, I will come to his residence or place of business to counsel with him. It is seldom I hear any more from that objecting customer; so in that way you can take care of kickers very satisfactorily indeed. I do not see where the objection holds good that, if you remove the meter immediately and the other meter should show a smaller registration, by comparison the old meter would be condemned. Of course, a person objecting to the size of his bill, if there has been any waste, will immediately shut off that waste; but a meter is usually read from a week to 10 days before a bill is sent off and probably 3 or 4 days have elapsed in the meantime, so that the old conditions which existed when the meter was registering before the kick was made for at least half of the time included in the next bill, and the new meter would only measure the gas used for half of that month. Of course, the new economies would influence the bill that much, but I don't believe it would make much difference. Those economies don't last long, and I have always been in favor of removing the meter and testing it and reporting. With us letter writing has been a great success.

Mr. Danforth—Mr. Dunbar, I think, probably is a little better correspondent than the majority of us. I had a little correspondence with him last month, and if I had never met Mr. Dunbar I would have been a warm personal friend of his right now. The correspondence was over a device which Mr. Dunbar makes for pushing hot coke into furnaces.

Mr. Eves—I would like to emphasize the advice which Mr. Riley gives as to the wisdom of handing the gas stove complaints to the gas stove department. It is there that the gas stove business is conducted. It is from that department that the instruction is given in the operation of the appliances, and where a complaint is received it is necessary that that department should be first on the ground to see where the trouble is and to cure it. I would refer to the fact that the number of these complaints received through the complaint department is very few indeed in Indianapolis. That is accounted for by the educational work we have done, and it goes to show that prevention is very much better than cure.

Mr. Riley—I might say, in answer to Mr. Dunbar, of course, we all realize that it will be necessary to carry on some correspondence. We may have complaints where the consumer's bill amounts to a considerable sum, and I believe if those cases were taken up by correspondence they would probably have had some very bad results. As far as changing the meters is concerned, I still think I am right about that. From a number of years of experience I have come to the conclusion that my present method is the best one. We used to think it was the best plan to change the meter immediately, but I always found I had bad results afterwards; that they would start to economize and all the power I possessed would not convince them that the trouble was not in the meter. That would occur 9 times out of 10. But if you leave that meter in for about 15 days and can show them that, after economy was practiced, it was not the meter that made the bill less, you can probably get good results.

Mr. Barnes—In our companies a rule was recently made to change a meter because of high bill unless the consumer is willing to come and see the test made. We will change it at any time he wants if he will see the test made. You couldn't do that in a large company very well, but in our small companies it works out nicely. Of course, there is not any object in our changing the meter and making tests if he does not see it done, because he might just as well take our word in the first place. It eliminates all argument. We show him how to make the test. All our companies are making the same rule and it works very nicely.

Mr. Riley—It is some distance in Indianapolis to our meter shop, but I have tried that, and out of probably 100 times I have made that proposition I have only had one individual in the city of Indianapolis that would witness the testing.

Mr. Dykeman—To carry out Mr. Riley's statement in reference to the number of requests we have made to have our customers witness the testing of the meters, only one person in four years accepted our invitation. We are happy to the extent of having on the last discount day a crowd, and consequently a great many complaints are registered, some foolish, but all must be looked into; and my idea is that a man with a great deal of diplomacy should be among that crowd of people, outside of the counter, who would listen to the complaints outside of the cashier's cage and smooth matters over. I think by this plan the number of our complaints on our last discount day would be materially reduced. That is our great trouble. I have advocated with our people paying on the 10th, 20th and 30th days of the month, so as to eliminate the crush we have on the last discount days, thus bringing our customers in three times a month, so that we would have more time to talk to them. These things are the outgrowth of a growing system like ours. Of course, it operated very nicely when our customers were only half the present number. In the matter of removing the meter, if our customer insists on having his meter changed, of course we do it. We obligate ourselves to do that. We also have a complaint man and we have kept complaints down very materially. One man (a Judge of the Circuit Court and a man of learning) made a complaint; the cause of the trouble was demonstrated to him, he remarking, "Wouldn't that skin you?"

The President—We have an added feature to our programme, in which Mr. Dunbar will tell us his experience and Mr. Davis will endeavor to tell us why. Mr. Dunbar will now bring the matter before the Association.

A DUNBAR EXPERIENCE.

During June, 1910, two 12 by 12 feet circular purifiers were installed in the Jeffersonville gas plant. Both boxes were in "the open" exposed to the heat of a summer's sun and the blast of winter's wind. These purifiers were constructed, each to contain two layers of oxide, each being filled to a depth of 4 feet. New oxide was purchased from a well-known manufacturer, our own make of oxide having previously been used. The new material showed evidence of heating before being placed in the purifiers, occasioned, I thought, by sprinkling with water the top of the 6-foot heap to prevent the wind from blowing away the finer particles. Being apprehensive of heating after putting it into the purifiers we did not wet the oxide. The first or lead box, as was expected, showed foul gas at the outlet in 10 days' time; the second box when it became the "lead" was the history of the first one. After this the oxide was put back into the boxes almost as wet as we could make it. The first box containing wet oxide, to our surprise, showed foul gas at outlet in about 3 weeks' time, and while the gas was entering at about 70° F., the temperature of the gas at outlet increased to about 125° F. The oxide was then removed and we found a 20 inch circular space in the center extending the entire depth in which space the oxide had fired. This experience continued to be ours, to date 7 boxes of oxide having caught on fire. As winter approached an inclosure was constructed to contain the center seal and connections, and in it a temperature of about 70° was maintained. The gas was found during the first severe cold weather to leave the outlet of purifier at about 40° F. Steam was turned into coils provided for in bottom boxes. The exhaust from these coils then went into steam pipe to warm the centerseal inclosure, the exhaust from which (mostly condensed steam) then was discharged into inlet of first box. This was regulated to maintain a temperature of gas at the outlet of second box of from 54° to 62° F., since which time the oxide more readily caught fire. The last box was in use but 5 days. Our experience is that the gas at outlet tests foul and then begins to increase in temperature, going up to (if allowed to continue in use) 120° F., and would undoubtedly go higher if not put out of use; 1 per cent. of air is admitted to assist revivification. Instead of now having but two layers of oxide in each box we have three layers of 2½ feet, and will not provide for four layers each to contain 30 inches of oxide. We have, at the suggestion of Mr. Davis, mixed sawdust with oxide to make it more porous. The boxes containing the three layers of oxide were filled but a few days ago and have not had time to fire. It has been suggested the oxide contained too much free iron, and that a reaction occurs between the iron and sulphur, forming sulphide of iron. Mr. Davis will show you how this may be possible. I am somewhat at a loss to know the cause of our trouble, but am inclined to the belief that the steam in

purifier coils raises the temperature at that point to too high a degree, which makes the reaction suggested by Mr. Davis possible. My idea is that purifiers in "the open" are all right, if the quantity of gas at 60° F. entering them is sufficient to maintain that temperature due to the reaction of purification. If not, then the purifiers should be inclosed in a building in which the proper temperature can be maintained. I had no way by which I could determine the temperature of gas near the steam coils, but it must have been considerably over 100° F., for the bottoms of the boxes were warm although the gas left the boxes, until the oxide caught fire, at a temperature of from 54° to 65° F. During the summer months the objection to heat due to steam coils will not hold good, but the same effect might have been caused by excessive heat due to the sun's rays. We had less trouble during the autumn months than in summer or winter. This experience is submitted in the hope to obtain a solution to the cause of the trouble.

The President—You have heard Mr. Dunbar's narration of an undesirable experience, gentlemen. I had a like experience myself. Mr. Davis believes he has a reason for this ignition or combustion, and I call on him for his theory.

Mr. A. B. Davis—Mr. Dunbar's experience leads me to believe that the oxide he was using must have contained free iron and sulphur at the time the boxes fired. An analysis of the oxide taken from a sample which he sent me ran as follows: Moisture, 1.1 per cent; wood shavings, 44.6 per cent.; free sulphur, 21.2 per cent.; free iron, 7.6 per cent. His statement that the oxide heated before it was used was proof of the presence of free iron, and the only reaction which could take place in the boxes with the absence of air would be a reaction between some elements capable of producing a great deal of heat in the absence of air. The only two elements in the box capable of such reaction were free iron and free sulphur, which, as the analysis indicated, were both present. I will now show that a tube containing free iron and free sulphur in a finely divided state when heated slightly fires, and each element attacks the other to form iron sulphide, with the liberation of a great deal of heat. This was the reaction which no doubt caused Mr. Dunbar's troubles.

Mr. Davis then conducted a successful experiment showing the firing of the free iron and free sulphur in a test tube.

The President—Gentlemen, we will not have any more papers today, but there are a few minor matters to take up. Mr. Eves has a telegram he would like to read to the Association.

A Telegram.

The Secretary—(Reading): "Denver, Col., Jan. 17.—Mr. Carl H. Graf, President, Indiana Gas Association, Fort Wayne, Ind. The National Commercial Gas Association sends greetings to the Indiana Gas Association. We wish you an enjoyable and interesting convention, and cordially and heartily invite the members of your Association to attend the next convention of the National Commercial Gas Association, to be held in Denver next December.—Clare N. Stannard, President."

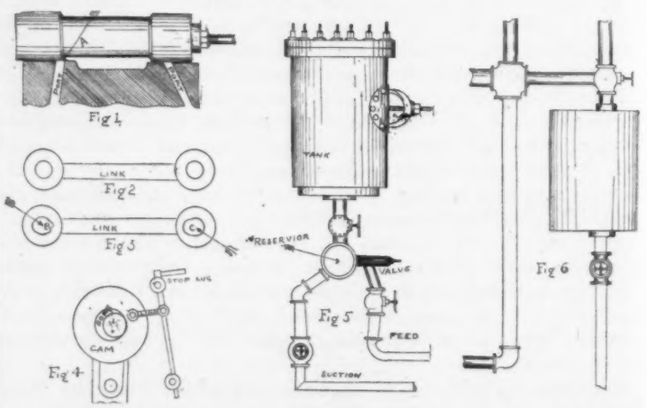
The President—If there is no objection we will leave the Secretary to reply to this invitation. We have had the pleasure of having some discussion this afternoon by Mr. Norman Macbeth, of the Welsbach Company. I say this because those of you who have not heard him before know what you may expect to-morrow morning when he delivers his address, and I want to urge every member to be in this room to-morrow morning at 9 o'clock. We will now adjourn to inspect in a body the fine gas exhibit that has been prepared by Mr. Mulholland and his associates.

(To be Continued.)

Power Wrinkles.

[Prepared for the Journal, by "R."]

In a certain plant there was trouble with speed regulation. Sometimes irregular speed is quite fatal to the running mechanism of the finer adjusted machinery of a plant, resulting in bad work and broken down apparatus, and sometimes the uneven speed produces loss of time. The irregularity in the speed makes more work for the mechanical department. As to the causes of the frequently altering speed, these may be traced to several sources. In some places the trouble is due to the non-effectiveness of the speed regulator; in fact, the worn condition, or the poorly adjusted order of the speed regulator, is almost always the cause of the irregular speed. In one plant the moving parts of the governing mechanism of the speed regulator were found in the condition shown in Fig. 1. The moving parts of a speed regulator have a certain distance to go and the controlling links must operate in harmony. If the harmonious element does not exist in the governing device, then you are going to have irregular speed, and when there is a worn condition of the parts, the conditions are liable to prevail as shown in this first cut. Here it can be seen that the valve fails to properly close the port at *A*, due to the worn condition of the links; A link in good order is shown in Fig. 2, and a link in the work condition which was found on the engine speed controlling device in question, is shown in Fig. 3. The bores in each end are worn, as at *B* and *C*. This created the lost motion, resulting in a partial closing of the port by the valve. You can overhaul the governor and get more play and partly overcome the lost motion and the worn links; but it is better to substitute new ones. That was done in this particular case after considerable monkeying with readjustment. Then the speed became regular. You can bush the worn links if you cannot get new ones. In another instance the shaft governing device was out of order, as in Fig. 4, due to the wearing of the bore of the cam as shown. The weighted lever acting on the stop lug and the connecting link also were found to be worn at all bearings. The eccentric could not fairly reach the destination owing to these conditions and irregular speed resulted. The engine had a tendency to race at times, while again the speed slowed down considerably. As in the first case, a remedy was obtained by substituting new parts for the worn ones and by properly setting these parts to operate in unison with the others.



In the next cut is given an illustration of a home-made device for the utilizating of a compound for dissolving boiler scale. In this instance the speed irregularities of the works were attributed to the poor water; the plant had to utilize water obtained from a river and some sunken wells. The water possessed a great tendency to make scaly and other foreign matter in the boilers, and the tubes and working parts were affected to the extent of interference with the regularity of the speed of the engine. The engine was overhauled and new parts put on where necessary, but trouble with the power arose at intervals. Then attempts were made to overcome the effects of the boiler scale and general corroded matter by admitting crude oil or kerosene into the boilers for dissolving the foreign substance.

The arrangement of the device, and the one shown in Fig. 3, can be understood by an examination of the diagrams. In the first cut the feed pipe joins into the boiler connection at an intersection of the pump and the boiler. The suction pipe is not under pressure, due to the arrangement of the cut off valves, but the valve can be turned with a wrench, made for the purpose, to admit the oil from the tank above to the reservoir in the desired quantity for the feed. The reservoir is fitted with a glass plate front, so that the engineer can observe the flow of oil and the working of the device. Fig. 3 is simply a drop connector for an oil feed. The dropping device alone is shown with the connections necessary for effecting the work. This contrivance is fixed in the pipe line of the boiler and the needed delivery of oil is arranged for. The device is intended for one boiler only. If there is more than one boiler in the plant, a device of this kind would be needed for each one.

At the annual meeting of the Rome (N. Y.) Gas, Electric Light and Power Company the Directors elected were: Jas. T. Lynn, Ed. Comstock, Thos. H. Stryker, Vic. N. Gurney, Armit L. Wilkinson, Fred. M. Shelley and Jno. D. McMahon.

Special English Correspondence.

COMMUNICATED BY NORTON H. HUMPHRYS.

SALISBURY, ENGLAND, March 10, 1911.

Continuous versus Intermittent Charging.—Mr. Townsend and his Fitting Department.—For King and Country.

It is now 8 years since I was professionally engaged in some investigations as to the capabilities of the Settle-Padfield vertical retort as erected at Exeter Gas Works. A full sized specimen had been provided, with special condensers, purifiers, meter and gasholder, and arrangements for collecting liquid products. Some of the results were published in the *Journal of Gas Lighting* at the time, and attracted much interest and also some criticism. So far as I know, they were the first results published that illustrated the advantages of the continuous system of carbonization, as compared with the ordinary or intermittent system. As a general proposition, it is evident that any chemical process working destructive distillation, can be better and more regularly conducted, and under more thorough control, by the continuous method. The manufacture of sulphate of ammonia from gas liquor, and the firing of furnaces for raising steam, may be instanced as examples. So it is not to be wondered that some of the early pioneers in gas manufacture were workers in this direction. Clegg's web retort, Porter's screw, and various other mechanical devices were introduced, all aiming at the continuous feed and discharge. The difficulties of getting any mechanical arrangement that would stand the heat, or the alternate heating and cooling to which it must of necessity be subjected, proved to be insurmountable, and for half a century or more the horizontal retort and manual charging and discharging constituted the sole practical method of manufacture. It is not so very long ago that mechanical experts were wont to enlarge on the lack of development, especially in large works, which they criticized, with some degree of justice, as being nothing more than a multiplication of the small ones.

The chief advantages shown by the Exeter experiments were an increased yield of gas, to the extent of 25 or 30 per cent., as compared with ordinary methods, which was not secured (as is the case with intermittent distillation at high heats or other means of attaining a large yield) at the expense of the quality, or by dilution of the product with air or furnace gases. There was also a greatly improved yield of coke, both as regards quality and quantity. The gas of coke was improved at the expense of the tar, the yield of which was greatly reduced, and, indeed, it was found to be quite possible to produce practically no tar. That fluid may be regarded as an accidental product of the intermittent system, although it is generally looked upon as an unavoidable item. It has been claimed as an advantage incidental to certain new processes that are stated on high authority to be superior to the usual methods of making gas, that there is a large yield of valuable liquid products. Now tar is, constitutionally, a valuable product, but for various reasons which need not be repeated here, gas companies do not get a living profit out of it, and the commercial value of the product from a ton of coal can be figured in pence. A very small increase either in gas or coke is sufficient to compensate for the disappearance of the whole of the tar.

One way of partially reducing the evils inseparable from the intermittent system is to minimize them by the use of heavy charges involving a longer period of carbonization than the time honored 6 hours. Considerable improvement on the ordinary results, on the lines thus indicated, can be secured by these means, but at best they must fall short of completeness.

The whole question of carbonization, apart of any consideration of the system adopted, has of late been greatly improved in detail by the introduction of mechanical conveying and stoking devices. Even in comparatively small works we may find that the coal is not in contact to manual labor from the time it leaves the lighter or railway truck till it finds its last home in the retort, and the same applies to the coke, which is drawn, cooled, sorted and loaded into the receptacles that are to carry it to its destination, without being touched by hand. Amongst other details the continuous automatic feed and discharge of vertical retorts have been brought to a high degree of perfection, with the result that the advantages peculiar to the upright retort are becoming generally appreciated. The Woodall-Duckham system is being introduced on a large scale in London, Bournemouth and many other places. The Glover-West is in use at St. Helens, Manchester, etc. Extensive installations are in hand at Edinborough and Glasgow, and the vertical system is very largely adopted on the Continent.

Very great expectations existed at one time with regard to the future of the inclined retort, which was looked upon as the coming system, and which promised very considerable economy in the matter of labor. But so much has not been heard of late in respect to extensions of this system.

But whatever the system that may eventually take the front place it is evident that old-fashioned notions on the subject of carbonization must be re-considered. It was generally supposed, and the impression is by no means extinct to-day, that there is an economic limit in respect to the yield of gas from coal. And that if the yield was forced beyond that limit, the quality of the product must suffer. As much may be true in regard to any one particular system. It is as true to-day as it was 25 years ago, that with the grate furnace and manual labor as practiced in 1885, the yield of gas cannot by any possibility greatly exceed 10,000 cubic feet per ton. But after admitting as much, it is still open to look for substantial improvements in other directions. The mechanical stoker and regenerator furnace have enabled makes approaching 12,000 cubic feet per ton to be secured from the horizontal retort. The vertical retort and continuous charging beat that figure by another 1,000 cubic feet or more. And while in the limited sense just referred to, a high or forced yield may mean some sacrifice of quality, the same does not apply to the new processes. So we must confess to-day that there is no narrow limit to the possible yield per ton.

Mr. W. W. Townsend, of Hereford, in a paper recently read before the Midland Association of Gas Managers, goes to the root of the chief hindrance to the extended use of gas, and that is the unsatisfactory nature of the consumers' internal fittings. There is, as he remarks, a very general impression that there must of necessity be a slight odor of escaping gas, in any home piped for gas. The view is supported to some extent by actual fact. The slight odor of gas is common, but it is by no means unavoidable, and more than that, is the result of ignorance or carelessness. To be quite frank we may say that the gas company's men are not always free from blame in this respect. Mr. Townsend's practice is to test all jobs done by his fitting department, under 80-tenths head of water, and this test is applied in all cases, whether new pipe has been laid or not, and is not confined to new installations. This plan has elicited the fact that very few house pipes and fitting will stand even such a moderate pressure. To give an example he mentions one large house fitted with a ¾-inch service, and 30 cubic feet per hour meter, which was expected to carry a sufficient supply for 4 gas fires, 1 cooker and 15 lights. The house pipes were too small, badly laid and unsound, fittiugs defective, ball joints leaky, lighting burners not properly adjusted, gas fires old-fashioned and extravagant. In this case the consumer was not dissatisfied with his appliances or fittings, and his only complaint was that the light was better some nights than others, which he ascribed to variations in the quality of the gas. Unfortunately this is a typical case of what may be found in any town, I may say in any street in England. Very often the original pipes and fittings that were laid when gas was first installed, perhaps 60 years ago, are retained in use, and the consumer does not blame them, but he blames the gas. The difficulty is that the consumer will not incur any expense, and as often as not refuses to believe that his fittings are at fault. It costs nothing to grumble at the gas company.

One cannot be surprised that our competitors are shrewd enough to take advantage of this position. They do not hesitate to encourage the belief that the gas is at fault and that the only remedy is a change. And then they fit up their special system brand new, and with every modern improvement skilfully and properly fitted, and compare the results obtained under such favorable circumstances with those from the dilapidated and antiquated old gas fittings.

It is very much easier to point out this defect than to suggest a remedy. Mr. Townsend has established a fitting department and gives sound advice or carries out installations complete. But the general difficulty is that the older class of gas works' ontside men are not sufficiently educated to be able to understand the latest developments in the way of burners and apparatus, such as high pressure. The first thing to be done is to find suitably qualified men to undertake the supervision of the work, possessed of not only practical skill, but also acquainted with the scientific principles concerned. An error in adjusting an inverted burner may easily lead to the appliance being condemned. Mr. Townsend again touches the root of the matter in his concluding remarks, when he insists that nothing less than the best will do for the fitting department. It should be under the control of a practical man of energy, tact and address, and his assistants should also be practically trained, while the stores should be

central and well organized. All this cannot be done perhaps in a week, but that is no excuse for not doing it at all. It is possible to move in the direction of the lines laid down and to introduce fresh developments and improvements as opportunity offers. A slow but sure action is likely to prove more useful in the end than brilliant but spasmodic efforts. But a competent outdoor department, a good centrally situated office, showroom and stores, are a present-day necessity. It is more important to have them than to reduce the price of gas.

In the stress of technical detail that is required from a manager of gas works, there is danger of neglecting the higher duties of life. Apart from the calls of business, there are social and patriotic duties that should never be slighted, and the fact that the claims of the office or the laboratory are onerous does not alter or reduce the responsibilities that fall upon any and every citizen. One questions at times whether the modern craze for technical education does not tend towards a product that is too much of a machine and too little of a man. These reflections are suggested by an interesting event, unique in the annals of the gas industry, which took place last week. The Secretary of State for War visited the Beckton gas works, the largest station of the Gas Light and Coke Company, and was received by three companies of the Territorial Army, with full band, guard of honor and ambulance corps, composed entirely of employees of the Company. After an inspection of the men on parade, Mr. Haldane proceedod to open a new miniature rifle range on the works. The Resident Engineer, Mr. Reeson, gave some account of the Rifle Club, which had been in existence 5 years, and during that time had taken up a most imposing list of honors and trophies. An inspection of the works and an informal luncheon formed the termination of this extremely interesting function.

Recent Patent Issues.

Prepared for the AMERICAN GAS LIGHT JOURNAL by ROYAL E. BURNHAM, solicitor of patents and counselor in patent causes, 833 Bond Building, Washington, D. C., from whom illustrations and specifications of any patent mentioned below may be obtained for 10 cents.

984,605. Method of Producing Nitrogen and Carbon Dioxide from Gaseous Products of Combustion. M. Reichel and H. Braun, Berlin, Germany, assignors to Nitrogen-Gesellschaft M.B.H., same place.

984,675. Feeding Mechanism for Gas Producers. G. H. Isley, Worcester, Mass., assignor to Morgan Construction Company, same place.

984,700. Coke Quenching and Coke Handling Apparatus. C. E. Pope, Pittsburgh, Pa.

984,701. Gas Valve. M. Popkin, Malden, Mass.

984,743. Apparatus for Gas Heating Stoves and Radiators. A. L. Boucher, Asieres, France, assignor of one-half to C. Comlot, Paris, France.

984,869. Gasholder. O. H. Wenderoth, New York city.

Items of Interest
FROM VARIOUS LOCALITIES.

"THAT "bundle of energy," clear sightedness and perspicacity, who is familiarly and well known to the fraternity under the titling of "Bob." Searle, and whose particular cares for some time have been chiefly concerned with the management of the Rochester (N.Y.) Railway and Light Company, has often been charged with favoring the electric division of that enterprise. It is true that the output of the electric division of the Company has largely increased, and that the electric lighting devices of an advertising nature are in use to such an extent on some of the thoroughfares of beautiful Rochester that these sections of the city are veritably panoramic close to midnight, but that Mr. Searle and his staff have been causing this display at the expense of the gas division is simply all wrong. If outwardly electric current is seemingly having an unduly inflated innings, inwardly it appears that gas is more than gaining its share. In the kitchens especially does this hold good; but nevertheless, gas for lighting, through the aid of the Welsbach type of lamps, also comes in for its share of the business growth of Rochester. To prove that Mr. Searle and his men are up and doing in and along the gas line, one has merely to look over the figures of the Company which show the number of gas meters that have been added to the service in the decade including the years from 1906 to 1910. Here they are:

Year.	Meters Set.
1906	4,285
1907	4,837
1908	3,385
1909	4,516
1910	5,195

The figures for 1908, reflecting as they do the serious depression in general business that ruled for the latter half of 1907 and the earlier half of 1908—even then the increase was noteworthy—are nevertheless indicative of the activity of the gas men of the city. However, we submit that an increase in 5 years of 22,218 meters (in 1905 the meters placed numbered 28,059), or a total of 50,277 meters, is positive evidence that Mr. Searle, despite these efforts concerning the spread of electric current use, is very much on the job, so far as that task enters into the growth of the Company as a whole.

"V. M. B.," writing to the JOURNAL under date of the 18th inst., says that, at the annual meeting of the "Gas Companies Baseball League," of New York, the officers elected were: President, F. de Figaniere; Vice-President, C. M. Carbonell; Secretary, Hugh Sharpe; Treasurer and Press Representative, W. D. McFarland. In 1911 the League will be composed of 12 clubs, or 4 more than in 1910. The membership has the following representatives: Consolidated Gas, 6 teams, thus designated: Branch 1, 2, 3, 4, 5 and 6; Standard, Central Union, Northern Union, New York Mutual, New Amsterdam and Municipal Lighting Companies. As arranged, the schedule consists of 22 games, the first of which is set for April 15th; the final for September 16.

MR. JAMES M. COLES, heretofore connected with the Consolidated Gas Company, of Long Branch, N. J., has been appointed to a responsible position on the staff of the General Gas Light Company, with headquarters in New York. In connection with this Company's business it is worthy of note that it recently made a shipment of 400 arc lamps to the Tokyo (Japan) Gas Company.

AN interesting bit of news that came to us from Beatrice, Neb, under date of the 15th inst., is to this effect: "The joint committee, composed of 3 councilmen and 3 citizens, appointed last fall by the Mayor to investigate the business of the local Gas Company, with a view to determining a fair price to charge for gas, met last week with the Council for the purpose of submitting its findings in the premises. The committee had retained two well known engineers (Mr. H. I. Lea, of Chicago, and Prof. S. A. Scipio, of the Nebraska State University) to make report as to the value of the manufacturing and distributing divisions of the plant or systems. Having allowed for operating expenses, depreciation, interest, etc., both experts declared that the current rate charged for gas in Beatrice was altogether too low, and that it would have to be increased at least 20 per cent. before the Company could realize a fair interest on the investment—the ruling Beatrice charge is $1 per 1,000 cubic feet. Some time ago the Company instituted a charge of 25 cents per meter on minimum usage account, which act raised a cry so loud and shrill that the Council determined upon the investigation; but, as a member of the Council remarked, on hearing the figures: 'This is a great surprise to me. However, as the reputation of the engineers who conducted this investigation is international, and as the investigation was carried on in the open; further. as the authorities of Beatrice have no desire to cripple any local industry, there can be little doubt that the authorities will grant the relief necessary to the Company's continuance in active business.'"

AT a special meeting of the shareholders in the Alton (Ills.) Gas and Electric Company, the matter for consideration was a proposition to increase the capital stock in the sum of $100,000, the proceeds of the issue to be used in extending its gas and electric distributing lines. There was no dissent. The Company's present capital is $500,000.

MR. F. E. NEWBERRY, having completely recovered from his recent illness, will at once take up permanently the duties going with the position of Manager to the Lee County Gas and Electric Company, with headquarters in Dixon, Ills. Mr. Newberry has been Manager of the Citizens Gas Company, of Kankakee, Ills., since 1905.

THE Geneva-Seneca (N. Y.) Electric Compeny will be merged by Mr. W. T. Morris with his other gas and electric properties in Wayne county, N. Y., with the Western New York Gas and Electric Company. In the changing over Mr. J. A. Bendure will resign charge of the Geneva plants, and he will be succeeded by Mr. J. A. Doyle, of Syracuse. Of course, all these changes in no wise affect the posi-

ion of that clever gentleman, Mr. Morris Tracey, the General Manager of all the Morris properties. The noted changes will materialize the 1st prox. Mr. Bendure's resignation was prompted by the fact that his other personal interests had assumed proportions sufficient to require his undivided attention.

In connection with the above it may be stated that, on the 13th inst., the New York Public Service Commission for the Second District, has approved of an agreement whereby the Geneva-Seneca Electric Company and the Wayne County Gas and Electric Company consolidate into and form the Central New York Gas and Electric Company. The succeeding corporation is authorized to issue common and preferred stock in accordance with the provisions of the consolidation agreement—one share of preferred stock and two shares of common stock in exchange for each three shares of the present outstanding stock of the constituent Companies. The new corporation is authorized to issue $150,000 additional preferred stock, to be sold at par, to execute its mortgage to secure an issue of $2,000,000 in bonds, and to presently issue $650,000 bonds (5's) which shall be sold at not less than 85. It is finally authorized to issue a second mortgage to secure an issue of $150,000, six per cent., 5-year notes, to be sold at par and for cash.

Mr. W. K. Harrington, Manager of the American Meter Company, reports that they have had great success with their Hinman calorimeter; in fact, the orders have been largely in excess of their manufacturing facilities.

The authorities of Portland, Me., are again considering the advisability of selling the stock in the Portland Gas Light Company that has been in the city treasury for years. They will have little difficulty in securing a purchaser therefor.

The authorities of Westfield, Mass., have ordered that the selling rate for gas (the gas plant is operated municipally) be reduced the 1st prox. to $1.10 per 1,000 cubic feet—a concession of 10 cents per 1,000.

The Beverly (Mass.) Gas and Electric Light Company will formally absorb the properties of the Danvers (Mass.) Gas Company. The word formally is used in that the former has practically owned the latter for years.

Mr. J. J. Garrison, Sales Manager of the gas division of Rathbone, Sard & Co., reports that the sales in his branch, for the first two months of the present year, show an increase of some 30 per cent. over last year. Their No. 301 short cabinet range has proven one of the best sellers which they have put out during the past few years.

The National Gas Governor Company, of Manhattan, has been formed by Messrs. F. G. C. Lyon, H. S. Reynolds and G. S. Smith, of New York city. It is to manufacture and sell devices for controlling the flow of gas and electric currents. It is capitalized in $2,000,000, which would seem quite ample.

The Mayor and City Council of Annapolis, Md., joined by the Annapolis Chamber of Commerce and the Anne Arundel County Board of Commissioners, have appealed to the State Public Service Commission to order the Annapolis Gas and Electric Company to make a sensible reduction in its rates for gas and electric service. The schedules certainly would seem on the high side, as evidenced from the following figures: Gas, per 1,000 cubic feet, $1.75; electric current, to incandescent lamps, 10 cents per kilowatt; arc lamps, each per annum, $90 to $120.

That solid aggregation or trust body, which has done so much to throttle the cast iron pipe industry of the United States, recently received a notable order from the Portland (Ore.) Gas and Coke Company. Under it the contractor agrees to ship 12,000 tons of pipe to the Portland gas folks, the deliveries to be completed within 90 days.

Some days ago, in Louisville, Ky., before Judge Field and a jury, the case of Eliza Fry *vs.* The Louisville Gas Company was tried out. Plaintiff alleged that, on a certain specified date, gas escaped from the pipes of defendant into her room in a house on 15th street; that the gas took fire or became ignited, much to her personal suffering and material loss, in that, lightly clad, she was obliged to leave the house and go into an external atmosphere, which was close to the freezing point. The effect was prostration from pneumonia, with the result that her lungs are now permanently impaired. She sued for $5,000 damages, and the jury awarded her $1,400. The case will be appealed.

A correspondent in St. Louis, under date of the 18th inst., forwards the following: "A day or so ago a select party of 25, made up of brokers and other business men prominent in the affairs of East St. Louis, Ills., and Belleville, Ills., were carried by special car to the new gas, electric and power plants of the St. Clair County Gas and Electric Company, under the guidance of representatives from the bond house of D. Arthur Bowman & Company. The plants were carefully inspected, and later on the party was entertained at a buffet luncheon served in the house of the Elks' Club, Belleville. A feature of the speechmaking was the discourse by Mayor Frederick J. Kern."

"M. B. M." incloses the following: "I failed to note any mention in the Journal of the recent annual meeting of the Nashville (Tenn.) Gas Company, but as some important steps were taken, and as the Company seems to be slowly coming along to better things, I thought possibly your neglect arose through oversight rather than premeditation, so I send you these details, as the same were made public the morning after the session: 'At the annual meeting of the shareholders in the Nashville Gas Company several important steps were taken. A resolution was indorsed to increase the capital stock in the sum of $350,000—or from the present sum of $1,150,000 to the sum of $1,500,000. It was also decided to declare a stock dividend of 20 per cent. on the outstanding capital, and it was determined to make a substantial increase in the dividend rate (it is now 3 per cent. per annum), the actual figure to be determined by or in the discretion of the Directors. The stock dividend will take up $230,000 of the agreed on increase, and the balance ($120,000) will go to absorb the floating debt—the latter stock will be sold at not less than par. The stock increase is justified on the ground that large expenditures had been made for rebuilding and extensions, said betterments having been paid for out of the earnings, whereas the shareholders should have had the returns in the shape of dividends. Operating reports showed that the floating debt had been reduced to $371,000, from $409,000, and that the earnings were increasing in very satisfactory way. The retiring Board of Directors were re-elected and the meeting was harmonious in every respect. The Directors are: Thomas W. Wrenne, Jos. H. Thompson, Thos. E. Matthews, Jas. B. Richardson, T. J. O'Keefe, B. F. Wilson, Charles Shenkle, Albert W. Stockwell, W. D. Talbert and G. A. Puryear."

A tragic accident occurred in the home of the Schencks, Park Ridge, Chicago, when Mr. Charles Schenck, Sr., was instantly killed by a shot from a pistol in the hands of his wife. The early morning of March 18th Mrs. Schenck was awakened by a shuffling sound in the lower hallway and, seizing a pistol, exclaimed, "Who is there?" Receiving no answer, discharged the pistol, aiming the weapon in the direction of the disturbing sounds. No further sound was heard and Mrs. Schenck retired to bed. Early in the morning a servant found the dead body of her husband lying near the basement door. Deceased, who was prominent in Masonic ranks, was Superintendent of the Park Ridge branch of the Northwestern Gas Light and Coke Company.

The proprietors of the Port Jervis (N. Y.) Light and Power Company are congratulating themselves over the successful completion of the many betterments recently finished there. The main feature of the reconstruction was the placing of a handsomely finished 5-foot water gas set of the U. G. I. Company's latest type of construction. The new equipment also included new houses to hold the above-mentioned set, a P. & A. tar extractor and a set of purifiers.

The feature of the March meeting of the New York Companies' Section of the National Electric Light Association, which was held in 44 West 27th street, the evening of the 20th inst., was a lecture by Mr. Walter R. Addicks, Vice-President and General Manager of the Consolidated Gas Company. His subject was: "The Story of Gas, from Coal in the Mines to the Finished Product." The lecture included a noteworthy description of the plans and difficulties respecting gas distribution. It is needless to add that the lecture was a finished literary product or that it was listened to with close attention.

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MONDAY, MARCH 27, 1911.

The Market for Gas Securities.

The market for Consolidated gas broadened out quite a bit last week, and the broadening was accompanied by a good increase in quoted values. The advance was also tacked up with rumors of many kinds, some of them being exceedingly fanciful. While undoubtedly the time is nearing for capital re-adjustment in the Company's allied interests, the bare fact remains that, considering its earnings from actual business alone, its shares are worth twice par.

The Harrison 60-cent gas shouters in Chicago are having their innings just at present, but Peoples' shares have not been unduly depressed. The bond market is strong and a like state of affairs exists in relation to the average gas security.

Gas Stocks.

Quotations by George W. Close, Broker and Dealer in Gas Stocks.

115 BROADWAY, NEW YORK CITY.

MARCH 27.

☞ All communications will receive particular attention.

☞ The following quotations are based on the par value of $100 per share:

N. Y. City Companies.	*Capital.*	*Par.*	*Bid.*	*Asked*
Consolidated Gas Co.	$78,177,000	100	145½	145¾
Central Union Gas Co. — 1st 5's, due 1972, J. & J.	8,000,000	1,000	102	103
Equitable Gas Light Co.— Con. 5's, due 1932, M. & S.	1,000,000	1,000	—	105
Mutual Gas Co.	3,600,000	100	155	165
New Amsterdam Gas Co.— 1st Con. 5's, due 1948, J. & J.	11,000,000	1,000	100	101½
New York & Richmond Gas Co. (Staten Island)	1,500,000	100	35	50
1st Mtg. Gold Bds. 5 p. ct.	1,000,000	—	98¼	100½
New York and East River— 1st 5's, due 1944, J. & J.	3,500,000	1,000	103	105
Con. 5's, due 1945, J. & J.	1,500,000	—	100	102
Northern Union— 1st 5's, due 1927, J. & J.	1,250,000	1,000	94	100
Standard	5,000,000	100	—	75
Preferred	5,000,000	100	70	100
1st Mtg. 5's, due 1930, M. & N.	1,500,000	1,000	100	105
The Brooklyn Union	15,000,000	1,000	140½	142
1st Con. 5's, due 1948, M. & N.	15,000,000	—	106¾	107
Yonkers	299,650	500	130	—
Out-of-Town Companies.				
Bay State	50,000,000	50	5⅝	¾
" Income Bonds	2,000,000	1,000	—	75
Binghampton Gas Works	450,000	100	—	—
" 1st Mtg. 5's	509,000	1,000	95	100
Boston United Gas Co.— 1st Series S. F. Trust	7,000,000	1,000	82	85
2d " " "	3,000,000	1,000	47½	50
Buffalo City Gas Co.	5,500,000	100	5	8
Bonds, 5's	5,250,000	1,000	53	60
Capital, Sacramento	500,000	50	—	35
Bonds (6's)	150,000	1,000	—	—
Chicago Gas Co. Guaranteed Gold Bonds	7,660,000	1,000	104	106¼
Cincinnati Gas and Electric Co.	29,500,000	100	92	93
Columbus (O.) Gas Co., 1st Mortgage Bonds	1,500,000	1,000	96	98
Columbus (O.) Gas Lt. & Heating Co.	1,682,750	100	90½	91
Preferred	3,026,500	100	75½	80
Consumers, Toronto	2,000,000	50	200	204
Consolidated, Baltimore	11,000,000	100	106½	—
Mortgages, 6's	3,600,000		89	100
Chesapeake, 1st 6's	1,000,000	—	—	—
Equitable, 1st 6's	910,000	—	—	—
Consolidated, 1st 5's	1,490,000	—	—	112
Consolidated Gas Co. of N. J.	1,000,000	100	15	—
Con. Mtg. 5's	976,000	1,000	92	95
Bonds	75,000	—	—	100
Denver Gas and Electric	3,500,000	—	102	105
Detroit City Gas Co.	6,580,000	—	—	50
" Prior Lien 5's	5,619,000	1,000	97	100½
Detroit Gas Co., 5's	381,000	1,000	75	80
Equitable Gas & Fuel Co., Chicago, Bonds	2,000,000	1,000	—	101
Essex and Hudson Gas Co.	6,500,000	—	39	40
Fort Wayne	2,000,000	—	—	—
" Bonds	2,000,000	—	55	—
Grand Rapids Gas Light Co., 1st Mtg. 5's	1,350,000	1,000	100	101
Hartford	750,000	25	190	200
Hudson County Gas Co., of New Jersey	10,500,000	—	112	113½
" Bonds, 5's	10,500,000	—	103	103¾
Indianapolis	2,000,000	—	78	83
" Bonds, 5's	2,650,000	—	104½	105
Jackson Gas Co.	250,000	50	82	—
" 1st Mtg. 5's	290,000	1,000	97	100
Kansas City Gas Light Co., of Missouri	5,000,000	100	—	36
Bonds, 1st 5's	3,822,000	1,000	102	104
Laclede Gas Co., St. Louis.	10,000,000	100	111¾	112
Preferred	2,500,005	100	94¾	102
Bonds	10,000,000	1,000	102½	103
Lafayette Gas Co., Ind.	1,000,000	100	—	60
Bonds	1,000,000	1,000	60	65
Louisville	2,570,000	50	143	145
Madison Gas and Electric Co. " 1st Mtg. 6's	400,000	1,000	106	108¾
Massachusetts Gas Companies, of Boston	25,000,000	100	91	94¾
Preferred	25,000,000	100	97½	98
Montreal Gas Co., Canada	2,000,000	100	218	218¾
Nashville Gas Light Co.	1,000,000	100	110	—
Newark, N. J., Con. Gas Co.	6,000,000	—	56	58
Bonds, 6's	6,000,000	—	137	138
New Haven Gas Co.	2,000,000	25	200	—
Peoples Gas Lt. & Coke Co., Chicago	25,000,000	100	106¾	107
1st Mortgage	20,100,000	1,000	—	—
2d "	2,500,000	1,000	104	—
Rochester Gas & Electric Co.	2,150,000	50	88	—
Preferred	2,150,000	50	118	—
Consolidated 5's	2,000,000	—	104¾	105½
San Francisco Gas Co., Cal.	15,500,000	—	—	—
St. Joseph Gas Co.— 1st Mtg. 5's	1,000,000	1,000	100	102
St. Paul Gas Light Co.	2,500,000	100	—	—
1st Mortgages, 6's	650,000	1,000	113	116
Extension, 6's	600,000	1,000	112½	115
General Mortgage, 5's	3,445,000	1,000	90	95
Syracuse Gas Co., N. Y.	1,975,000	100	50	55
Bonds	2,047,000	1,000	100	104
Washington (D. C.) Gas Co.	1,600,000	300	399	400
1st Mortgage, 6's	600,000	—	—	—
Western Gas Co., Milwaukee	4,000,000	—	—	—
Wilmington (Del.) Gas Co.	600,000	50	361	—

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165 BROADWAY, NEW YORK CITY.

EXAMINATION AND VALUATION OF PUBLIC UTILITY AND POWER CORPORATIONS.
ADVICE AS TO CONSTRUCTION AND MANAGEMENT.

DIVIDEND NOTICE.

OFFICE OF THE UNITED GAS IMPROVEMENT CO., N. W. CORNER BROAD AND ARCH STS., PHILADELPHIA, March 8, 1911.

The Directors have this day declared a quarterly dividend of 2 per cent. (one dollar per share), payable April 15, 1911, to stockholders of record at the close of business, March 31, 1911. Checks will be mailed.

1866-5 LEWIS LILLIE, Treasurer.

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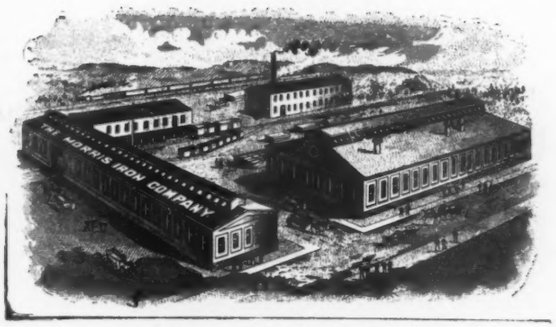

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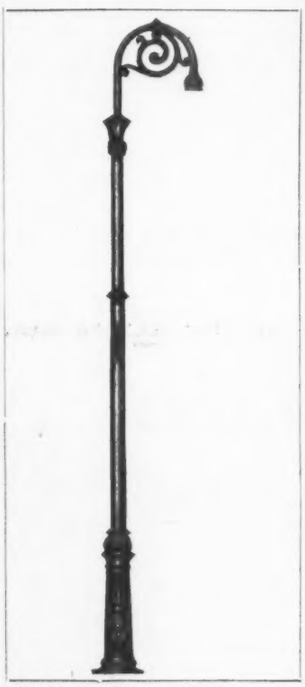

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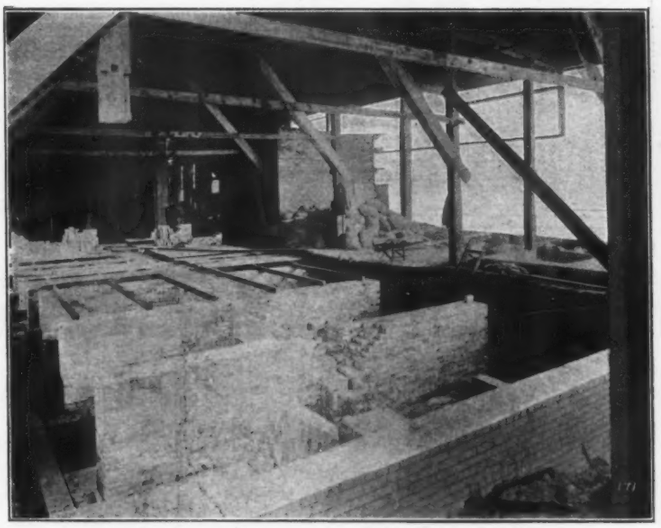

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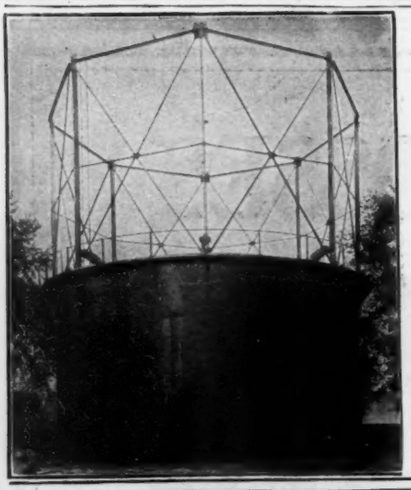

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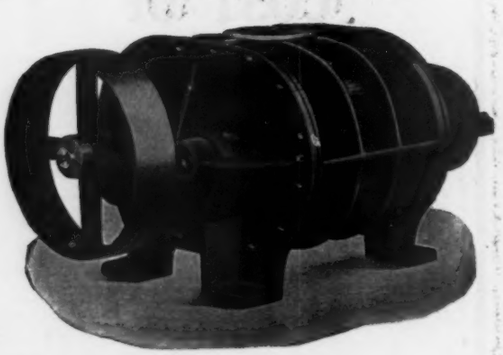

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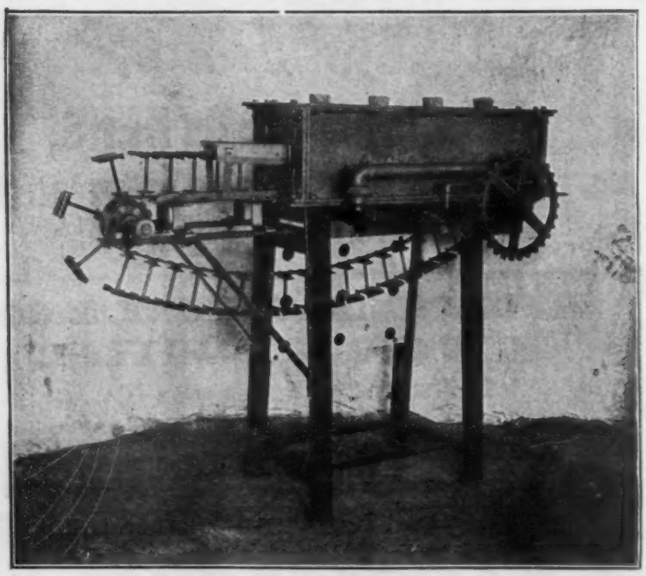

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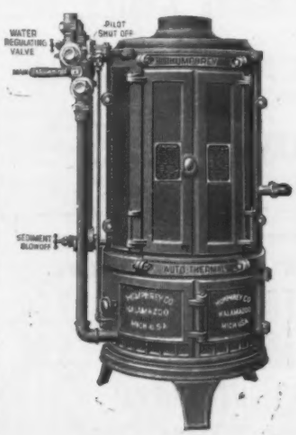

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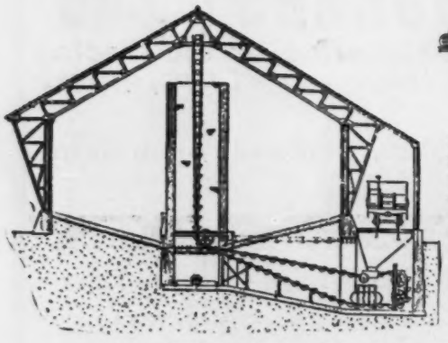

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PUBLIC LIGHTING TABLE FOR APRIL, 1911.

[Communicated by The American Meter Company.]

Day of Week.	MOONLIGHT SCHEDULE.		
	Date.	Light.	Extinguish.
Saturday	1	6.50 P.M.	4.50 A.M.
Sunday	2	6.50	4.40
Monday	3	6.50	4.40
Tuesday	4	12.00	4.40
Wednesday	5	1.00 A.M. F.Q.	4.40
Thursday	6	1.50	4.40
Friday	7	2.30	4.40
Saturday	8	3.30	4.40
Sunday	9	3.00	4.30
Monday	10	3.50	4.30
Tuesday	11	4.10	4.30
Wednesday	12	No L.	No L.
Thursday	13	No L. F.M.	No L.
Friday	14	No L.	No L.
Saturday	15	7.10 P.M.	10.00 P.M.
Sunday	16	7.10	11.00
Monday	17	7.10	12.00
Tuesday	18	7.10	1.00 A.M.
Wednesday	19	7.10	1.50
Thursday	20	7.10	2.30
Friday	21	7.10 L.Q.	3.10
Saturday	22	7.10	3.50
Sunday	23	7.20	4.10
Monday	24	7.20	4.10
Tuesday	25	7.20	4.10
Wednesday	26	7.20	4.10
Thursday	27	7.20	4.10
Friday	28	7.20 N.M.	4.10
Saturday	29	7.20	4.10
Sunday	30	7.20	4.00

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MEETING TIMES OF THE VARIOUS GAS ASSOCIATIONS.

American Gas Institute.—Annual meeting, October, 1911. St. Louis, Mo. Officers: President, Donald McDonald, Louisville, Ky. Secretary, A. B. Beadle, 29 West 39th st., N. Y. City.

Canadian Gas Association.—Annual meeting, June, 1911. ————. Officers President, Arthur Hewitt, Toronto, Ont.; Secretary and Treasurer, John Keillor, Hamilton, Ont.

Empire State Gas and Electric Association.—Annual meeting, Nov., 1911. New York City. Officers: President, C. R. Huntley, Buffalo, N. Y.; Secretary, C. H. B. Chapin, 29 W. 39th street. New York City.

Gulld of Gas Managers of New England.—Annual meeting, December. Young's Hotel, Boston; monthly meeting, second Saturday. Officers: President, A. K. Quinn; Newport, R. I.; Secretary, Walter G. Africa, Manchester, N. H.

Illinois Gas Association.—Annual meeting, time, March, Chicago, Ills. Officers: President, C. B. Strohn, Elgin, Ills.; Secretary-Treasurer, H. E. Newberry, Chicago, Ills.

Illuminating Engineering Society.—Annual meeting, Oct.. Chicago, Ill., 1911. Meetings of Sections, monthly. Pres't, A. E. Kennelly, Boston, Mass.; Secretary, Preston S. Millar, 29 W. 39th street, N. Y. City. Sections: New York: Secretary, Albert J. Marshall, 36 West 39th street. New England, Secretary, W. S. Farrow, 1290 Massachusetts avenue, Cambridge, Mass. Philadelphia, Secretary, G. B. Muth, 1000 Chestnut street Chicago, Secretary, F. H. Bernhard, Marquette Building.

Indiana Gas Association.—Annual meeting, Jan. 17 and 18, 1912, Indianapolis. Officers: President, S. E. Mulholland, Fort Wayne; Vice-President, Howard L. Olds, Indianapolis; Secretary-Treasurer, Philmer Eves, Indianapolis.

Iowa District Gas Association.—Annual meeting, time, June, 1911, ————. Officers: President, Austin Burt, Waterloo, Ia.; Secretary and Treasurer, G. I. Vincent, Des Moines, Ia.

Kansas Gas, Water and Electric Light Association.—Annual meeting, time, ———— Wichita, Kas. Officers: President, W. A. Scothorn, Hutchinson, Kas.; Secretary and Treasurer, J. D. Nicholson, Newton, Kas.

Michigan Gas Association—Annual meeting, time, Sept. 20, 21, 22, 1911; Detroit, Mich. Officers: President, A. P. Ewing, Detroit, Mich.; Secretary-Treasurer, Glenn R. Chamberlain, Grand Rapids, Mich.

Missouri Electric Light, Gas, Water Works and Street Railway Association.—Annual meeting, April 13 14 and 15, 1911; St. Louis, Mo. Officers: President, R. J. Irvine; Secretary and Treasurer, W. J. Cunningham, Springfield, Mo.

National Commercial Gas Association.—Annual meeting, December 5-12, 1911. Denver, Officers: President, C. N. Stannard, Denver; Secretary, Louis Stotz, 29 West 39th street, New York City.

Natural Gas Association.—Annual meeting, May 16, 17 and 18, 1911; Pittsburgh, Pa. Officers: President, John M. Garard, Columbus, O. Secretary, T. C. Jones, Delaware, O. Editor Wrinkle Department, F. W. Stone, Ashtabula, O.

New England Gas Association.—Annual meeting, third Wednesday in February, 1911; Boston. Officers: President, W. H. Snow, Holyoke, Mass.; Secretary-Treasurer, N. W. Gifford, East Boston, Mass.

Oklahoma Public Utilities Association.—Annual meeting, May 9, 10 and 11, 1911. Officers: President, E. C. Reynolds; Secretary, Galen Crow, Guthrie, Okla.

Pacific Coast Gas Association.—Annual meeting, Sept. 20, 21 and 22, 1911, Oakland, Cal. Officers: President, F. A. Leach, Jr., Oakland, Cal.; Vice P esident, W. Baurhyte, Los Angeles, Cal.; Secretary-Treasurer, John A. Britton, 445 Sutter street, San Francisco, Cal.

Pennsylvania Gas Association.—Annual meeting, April, 1911, Reading, Pa. Officers: President, J. H. Keppelman, Reading, Pa.; Secretary-Treasurer, William H. Merritt, Lebanon, Pa.

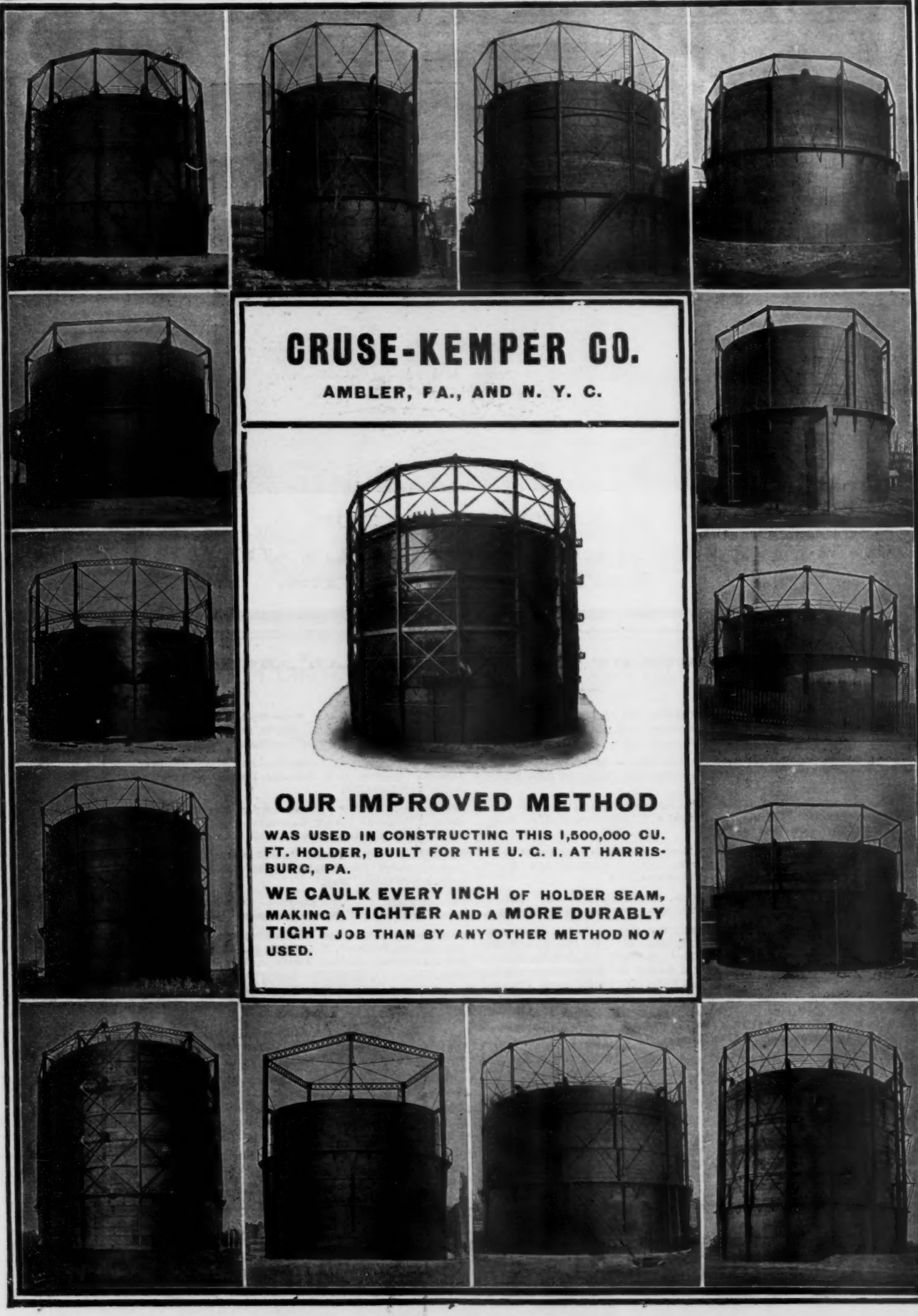
of Gas Lighting.—Annual meeting, December, 1911; monthly meeting, second Thursday. Place, New York City. Officers: President, Fred. S. Benson; Secretary, George G. Ramsdell, Waterbury, Conn.

Southern Gas Association.—Annual meeting, April 19-21, 1911, Montgomery, Ala. Officers: President, H. W. Frund, Salisbury, N. C.; Secretary-Treasurer, Jas. Ferrier, Rome, Ga.

Southwestern Electrical and Gas Association.—Annual meeting. April 27, 28, 29, 1911; Houston, Tex. Officers: President, W. B. Tuttle, San Antonio, Tex.; Secretary, D G. Fisher, Dallas, Tex.

Wisconsin Gas Association.—Annual meeting, May 17 and 18,, 1911, Milwaukee, Wis. Officers: President, W. H. Winslow, Superior, Wis.; Secretary-Treasurer, Henry Harmon, Milwaukee, Wis.

Directory of American Gas Companies, 1910. Price, $5.00. For Sale by American Gas Light Journal, 42 Pine St. N. Y. City.



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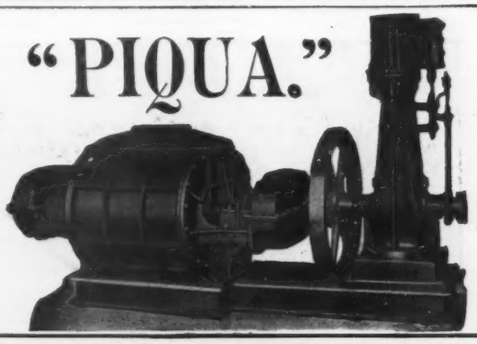

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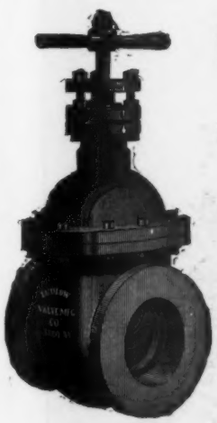

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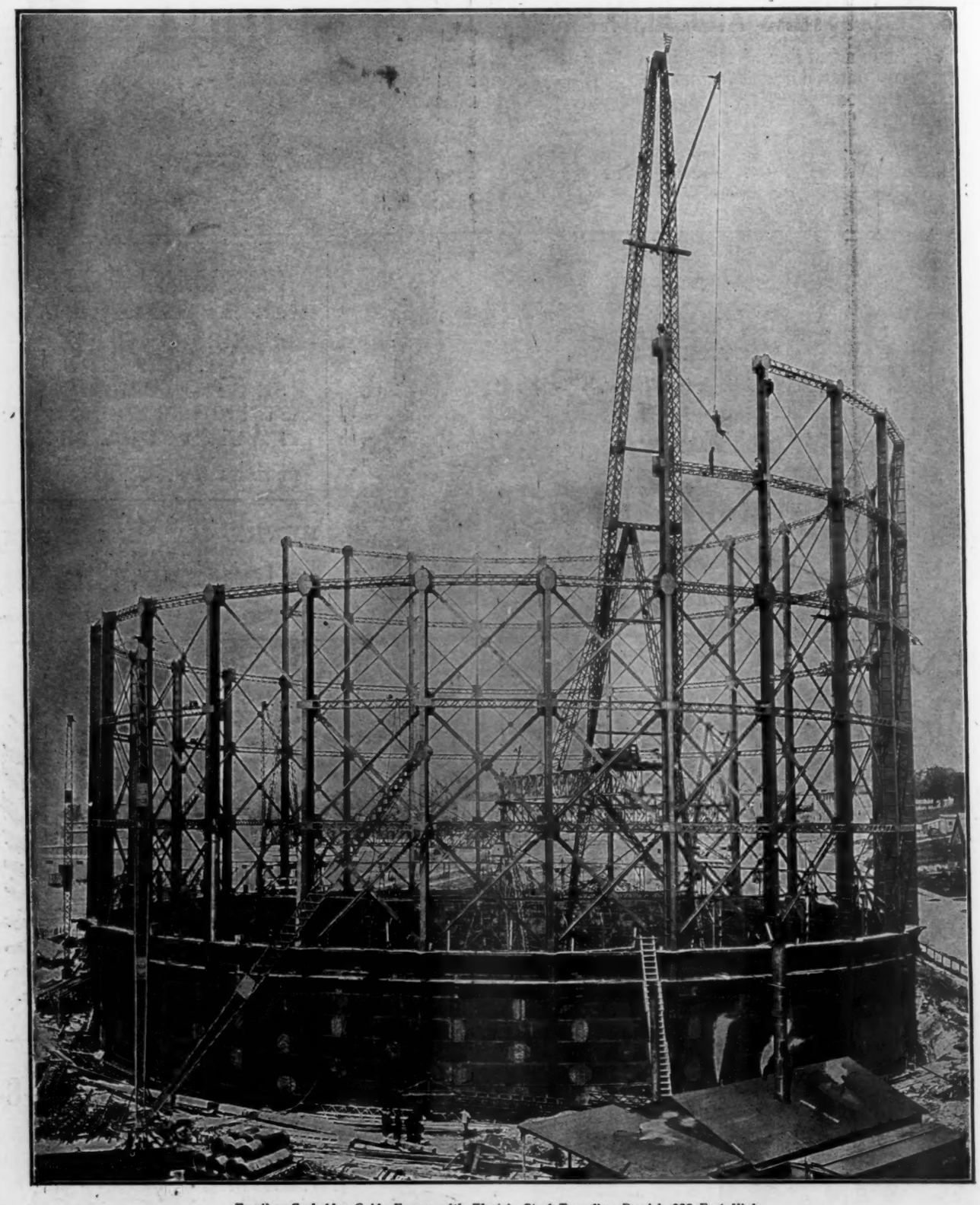

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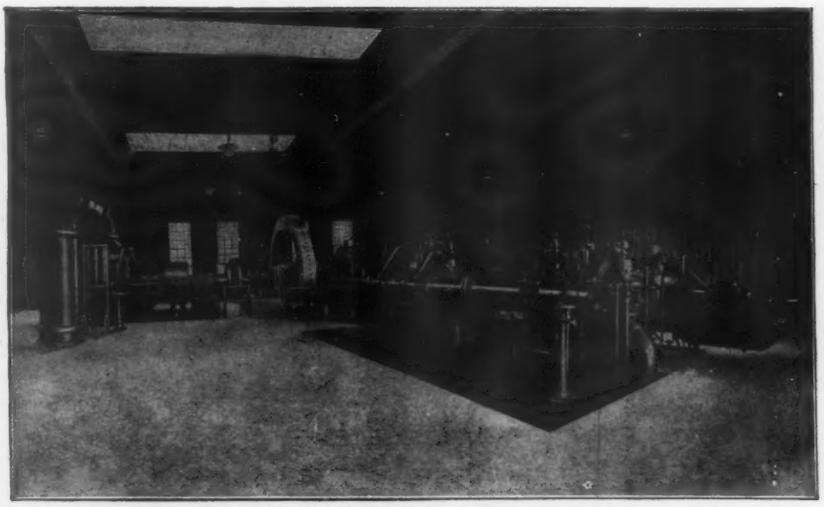

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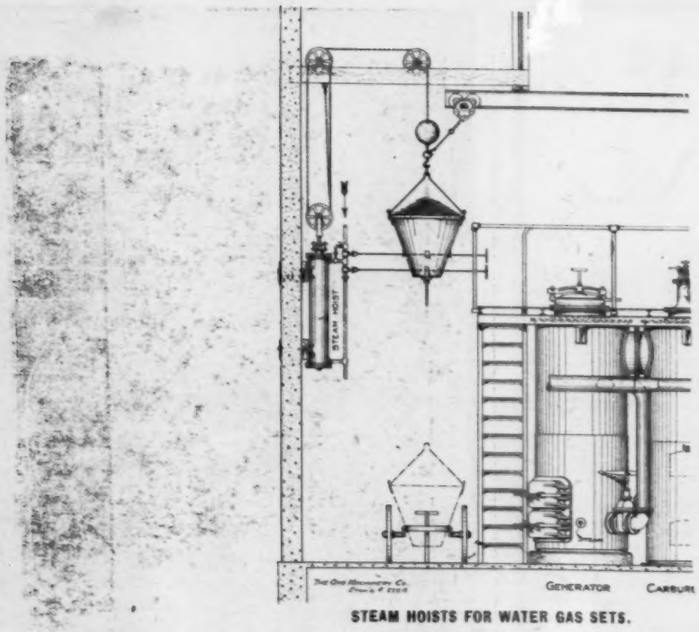

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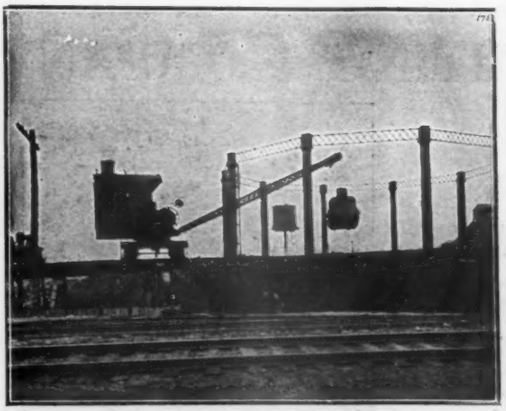

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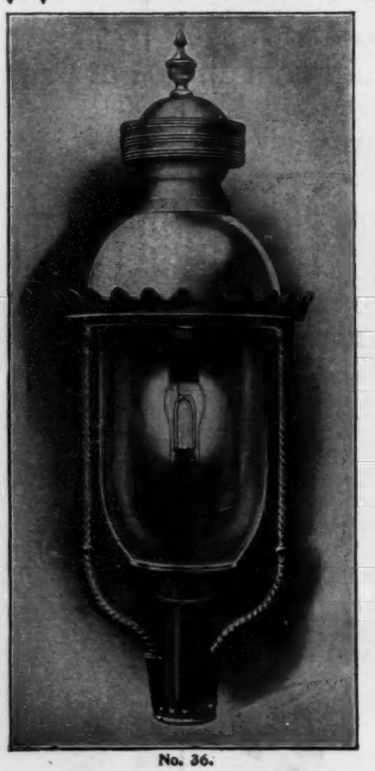

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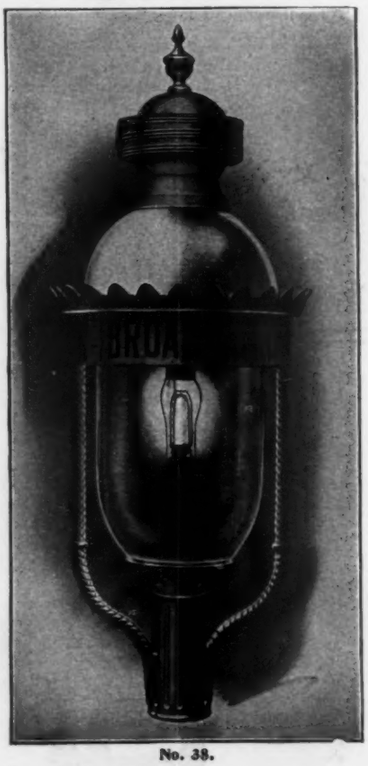

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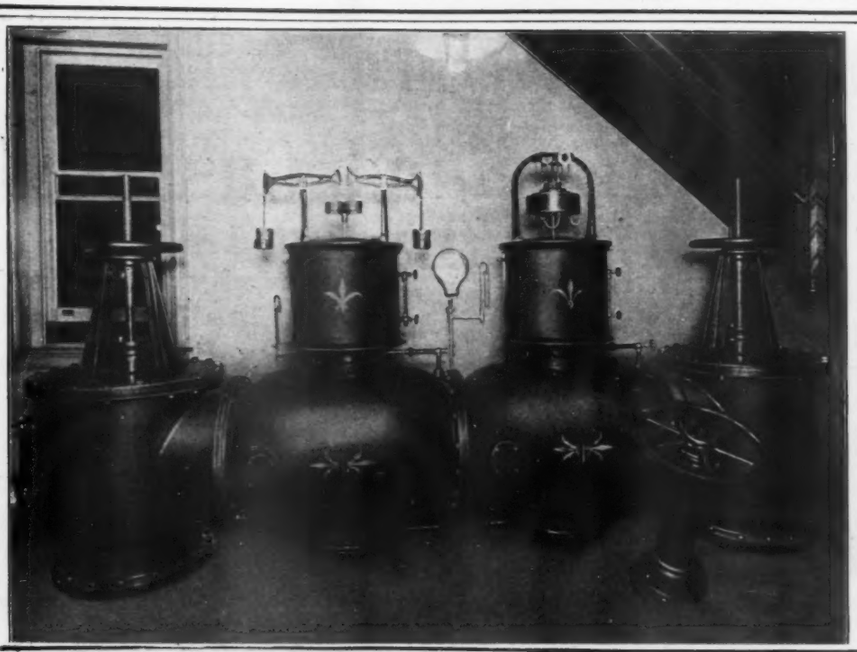

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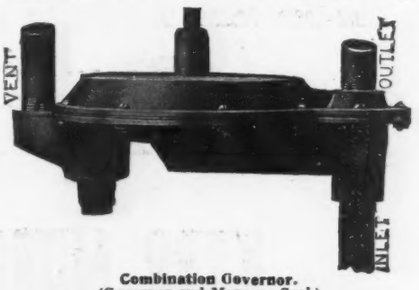

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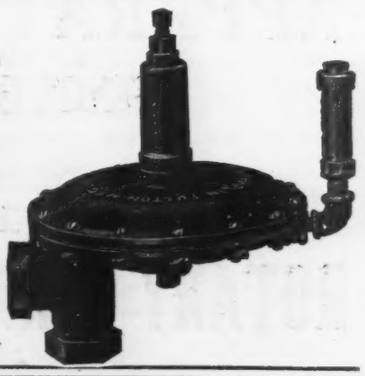

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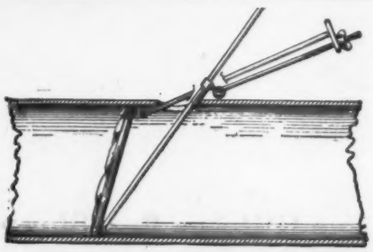

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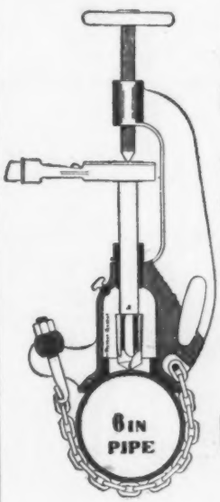

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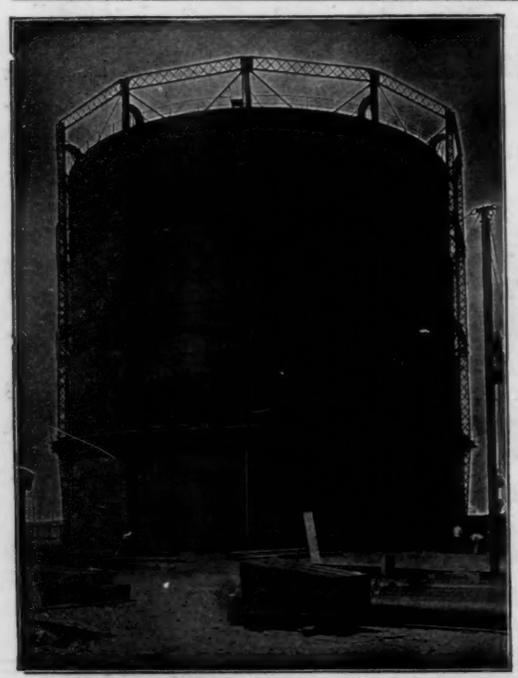

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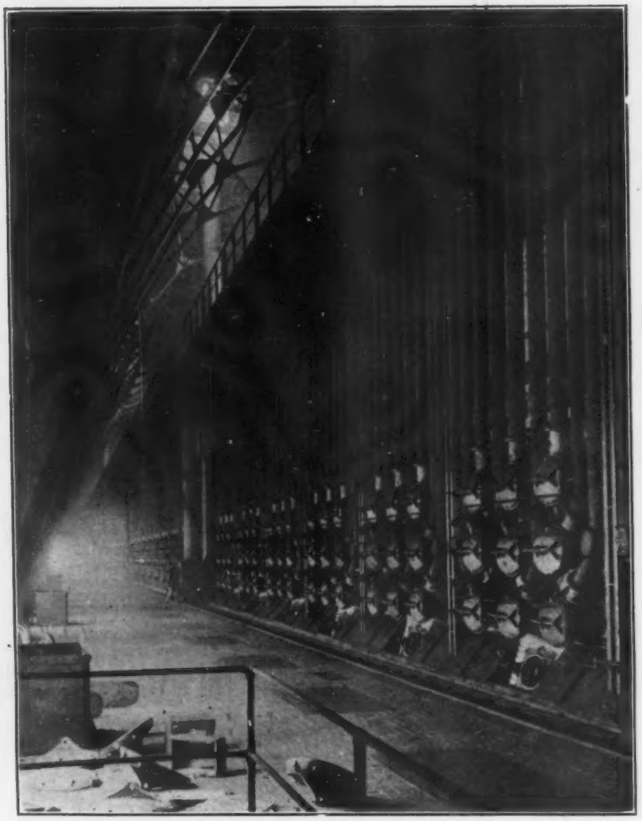

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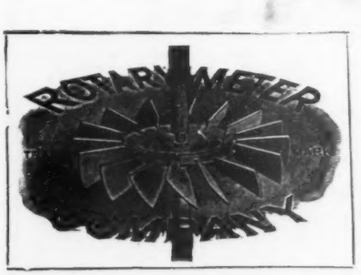

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PREPAYMENT GAS METERS,
WET AND DRY GAS METERS, STATION METERS, ETC.

REPAIRING OF ALL MAKES OF METERS, AND FITTED WITH OUR PREPAYMENT ATTACHMENT.

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INCREASED CAPACITY. INCREASED EFFICIENCY.

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PROMPT AND CAREFUL ATTENTION TO ALL REPAIR WORK

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METERS, Plain and Prepayment,

For Artificial or Natural Gas.

Repairing All Makes and Attachments Added if Desired.

SPECIAL METERS FOR ACETYLENE.

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The Standard Meter Co.

(INCORPORATED),

MANUFACTURERS OF

Natural and Artificial Gas Meters, also Station Meters, Provers, Portable Test Meters, and all other appliances.

The Pioneers of Large Capacity Meters for Natural and Artificial Gas.

Office and Factory: 3112-14-16-18-20 North 17th Street, Philadelphia, Pa.

SOLE AGENTS FOR THE MIDDLE WEST: The National Supply Co. of Kansas, Independence, Kas.

PACIFIC COAST REPRESENTATIVE: The W. F. Boardman Co., 718 Mission St., San Francisco, Cal.

EASTERN REPRESENTATIVE: L. J. Montgomery, 150 Nassau St., New York, N.Y.

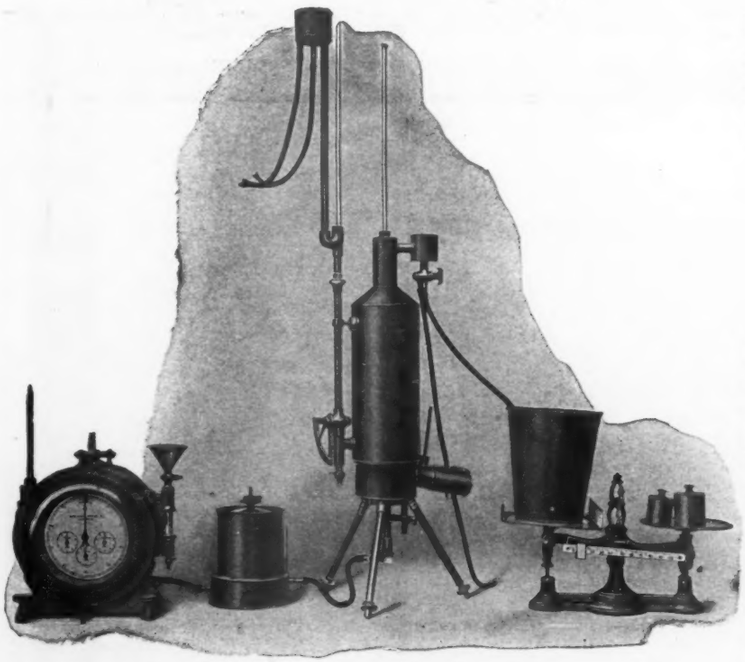
NEW YORK. PHILADELPHIA. CHICAGO.

THE AMERICAN METER CO.

ESTABLISHED 1884.

"WE AIM TO PLEASE."

WET and DRY GAS METERS,



Experimental and Station Meters, Pressure Gauges, Meter Provers, Drip Pumps, Service Cleaner Pumps, Service and Meter Cocks, Lamp Cocks and Torches, Photometrical Apparatus and all articles for the distribution, measurement and testing of gas.

WE WERE THE ORIGINATORS AND FIRST MANUFACTURERS OF THE PRESENT TYPE OF OPEN TOP METERS.

CIRCULARS AND PRICE LIST ON APPLICATION.

Sole Manufacturer of the

HINMAN CALORIMETER.

This apparatus is of the same general design and operates on the same principle as the well-known Junkers Calorimeter, which has heretofore been regarded by gas experts as the most satisfactory form of calorimeter in use.

We have, however, made some valuable improvements in the instrument, with a view to overcoming certain troublesome features in the original, making it easier to operate, and we find these improvements very acceptable to users of the calorimeter.

This Calorimeter, with its accessories, is constructed in accordance with the recommendations made by the Committee on Calorimeters of the American Gas Institute. It also has the approval of the Public Service Commission of the Second District, Albany, and has been found by them to give accurate results.

NEW YORK, 11TH AVE. AND 47TH ST.

HELME & McILHENNY,

Established 1848. 1339 to 1349 Cherry Street, Philadelphia, Pa.

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Wet and Dry Gas Meters, Station Meters, Provers, Gauges, Etc.

METERS REPAIRED

PREPAYMENT GAS METERS.

Our Own Patents. Strong. Simple. PROMPT ATTENTION CORRESPONDENCE SOLICITED.

COX'S LOW PRESSURE COMPUTER, - - - - $2.50
COX'S HIGH PRESSURE COMPUTER, - - - - 5.00

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WORKS AND MAIN OFFICE FORT WAYNE IND U S A

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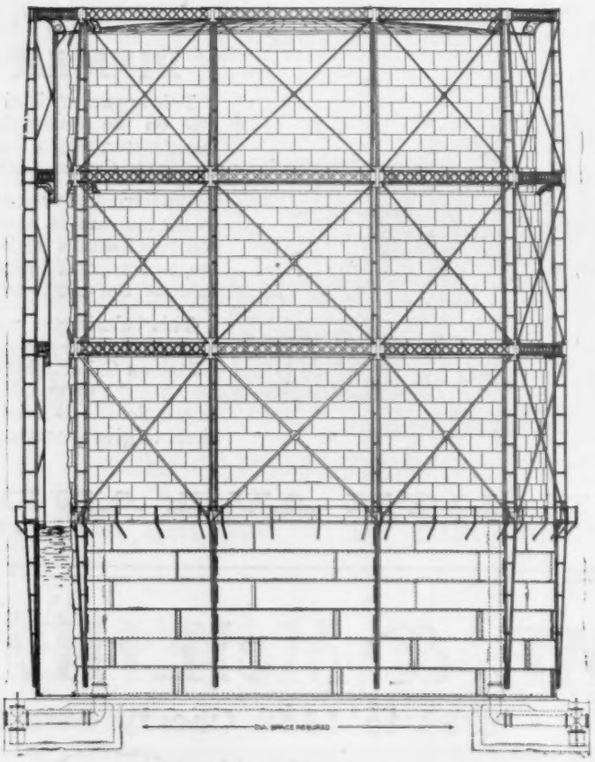

CONTRACTS RECEIVED THIS YEAR.

Jenkintown, Pa.	500,000	cubic	feet	capacity	Steel Tank.
Madison, Wis.	"	"	"	"	
St. Louis, Mo.	"	"	"	"	
St. Louis, Mo.	60,000	"	"	"	
North Trafford, Pa.	5,000 (2)	"	"	"	
South Elizabeth, N. J.	5,000 (2)	"	"	"	

CONTRACTORS AND BUILDERS

EVERYTHING FOR A GAS PLANT